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THE POSSIBLE DIAGNOSIS AND A TECHNIC IN EXCISION OF A CHRONIC INDURATED ULCER OF THE POSTERIOR WALL OF THE STOMACH *

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OMAHA, NEB.

The technic of operations on the stomach for ulcer, curiously enough, followed that for cancer, and the radical operation for ulcer situated near the pylorus is practically identical with that for cancer. To-day we are in many instances operating on ulcer not only to relieve the symptoms for which it is directly responsible, but to prevent cancer development on the ulcer base. The physician, more particularly the stomach specialist, hardly has a fair chance to study the relationship between ulcer and early cancer; for such knowledge we must go to the surgeon who, having a large experience in stomach surgery, excises, whenever possible, all chronic calloused ulcers and submits each specimen to the examination of an expert pathologist. In the Mayo clinic 71 per cent. of excised cancers of the stomach were found to have developed on an ulcer base, and doubtless many excised chronic calloused ulcers, if carefully examined, will be found to be undergoing early cancer changes; hence, wherever the location, wide excision, outside of the area of induration, is imperative as a logical surgical procedure. Not much has been written about excision of chronic ulcers of the posterior wall of the stomach (saddle-bag ulcer not considered); in fact, nothing of value with which I am familiar, prior to Coffey's beautifully illustrated article,[1] in which he describes among others, one case of this type, and an article by W. J. Mayo.[2] In Coffey's case, direct attack by excision through an opening in the gastrohepatic omentum was employed. Mayo describes and illustrates effectively, "transgastric excision of calloused ulcer of the posterior wall of the body of the stomach"; five patients have been operated on by him successfully after this technic. A note at the end of Mayo's article credits L. S. Pilcher with having made a successful transgastric excision of an ulcer of the posterior wall of the stomach in a similar manner.[3]

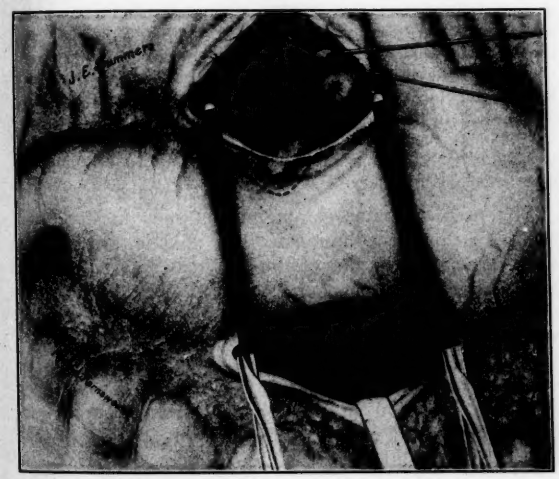

Fig. 1.—Gastrohepatic and gastrocolic omentum opened; ulcer freed, showing perforation and area of induration.

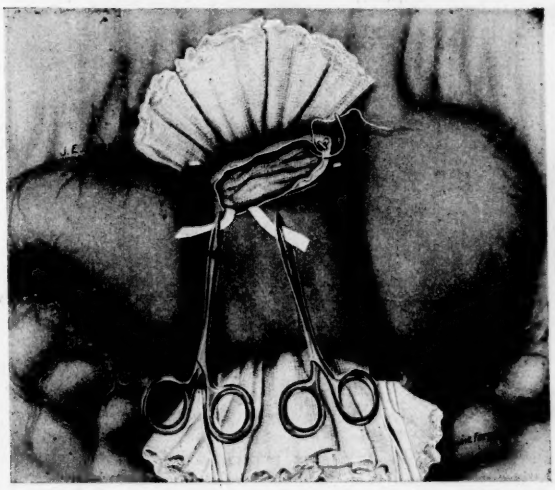

Fig. 2.—Lesser cavity of the peritoneum packed off; gauze packing in stomach.

Very few ulcers of the posterior wall of the body of the stomach have been attacked surgically. Moynihan ("Abdominal Operations") does not describe a technic, writing, "Though I have often found large adherent ulcers on the hinder surface (stomach) I have never been prevented from doing the usual operation" (posterior gastro-enterostomy).

* Read before the Nebraska State Medical Association, May 3, 1911.

1. Coffey, R. C.: Surgical Treatment of Ulcers Along the Lesser Curvature of the Stomach, Surg., Gynec. and Obst., December, 1910, p. 545.

2. Mayo, William J.: Transgastric Excision of Calloused Ulcer of the Posterior Wall of the Body of the Stomach, Ann. Surg., December, 1910, p. 797.

3. Case reported in the Long Island Med. Jour., May, 1908.

Our knowledge of the different forms and locations of gastric ulcer has been made possible only by a careful study of the subjective and objective symptoms and by comparing them with the operative findings. To date we have learned little from other methods, including the *x*-ray. I shall incorporate the essentials of the history of a case referred to me, as the symptoms differ somewhat from those commonly given of ulcer of the stomach, and may aid toward a recognition of chronic ulcer of the posterior wall of the stomach, particularly where its base is adherent to the pancreas or other structures.

REPORT OF CASE

During the latter part of December, 1910, Dr. A. D. Dunn of Omaha, turned over to me for operation in the Clarkson Hospital a man giving an undoubted history of chronic gastric ulcer. The notes on history and examination are by Dr. Dunn.

History.—"W. H., policeman, aged 40, married, was first visited Oct. 7, 1910. Family history negative. During the past two years, with a gradual onset, there had been, commencing about half an hour after meals, a sense of fulness and heaviness in the epigastrium with some belching; this condition would last one to two hours. The discomfort was greater after a full meal, and was increased by sour vegetables and condiments. One year before the man had vomited blood. For the past two months he had vomited blood frequently and for several weeks blood had been present daily in the vomitus; his stools had been tarry, and he had rapidly grown pale and weak. Blood showed 2,500,000 reds and 30 per cent. hemoglobin; there was marked tenderness in the epigastrium; he complained bitterly of pain across the back, which was worse after eating; there was a hyperesthetic, tender area to the left of the tenth, eleventh and twelfth dorsal vertebræ. The patient was sent to the hospital and put on a Lenhartz diet. The course was completed in six weeks, at the end of which time the blood had disappeared from the stools; vomiting had ceased and he was largely free from pain; he returned home. One night he overate; the epigastric pain recurred with intensity and blood reappeared in the stools; he complained of pain in the region of the heart, which usually commenced between 11 and 12 o'clock at night and lasted until 3 or 4 in the morning. There was intense soreness and heaviness in the testicles, which made it difficult for him to rise from his chair.

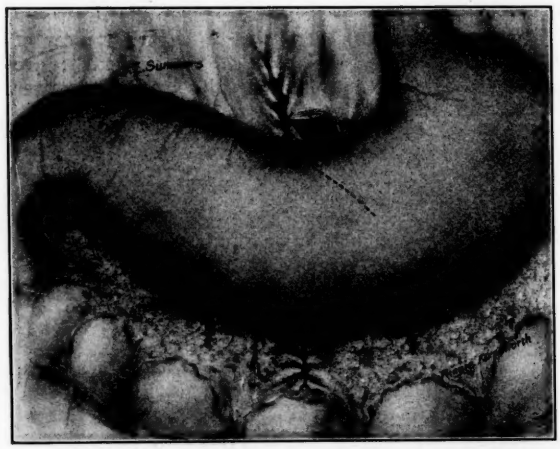

Fig. 3.—Dotted line, sutures in the posterior wall of the stomach; the repaired openings in the gastrohepatic and gastrocolic omentum; cigarette drains.

Examination.—"Dec. 8, 1910: Patient is much improved in general appearance. There is marked tenderness and rigidity in the epigastrium; the fifth, sixth and seventh interspaces in the nipple line are exquisitely tender, as is the whole right and left dorsal area on both sides from the sixth to the twelfth dorsal vertebræ. Both testicles are hyperesthetic but do not appear abnormal. A test breakfast shows a total acidity of 82; hydrochloric acid, 60; blood present. No retention after eight hours from a test meal.

"The patient returned to the hospital and after one week's starvation a modified Lenhartz diet was again instituted. During three weeks there was little improvement; pain persisted to the extent of making his nights miserable and the stools were rarely free from occult blood. As soon as any increase was made in the diet the pain would be aggravated and the occult blood would be in greater evidence. Inasmuch as there had been no satisfactory results from medical treatment, and the patient's physical condition and the blood findings (reds 5,000,000, whites 5,500, hemoglobin 85 per cent.) were such as to warrant an operation, it was deemed the proper moment for surgical intervention in an obstinate and persistently bleeding ulcer."

Operation.—I operated on Dr. Dunn's patient in the Clarkson Hospital Jan. 2, 1911. The ulcer was situated on the posterior wall of the stomach; it was large and indurated. The anterior wall of the stomach could be invaginated into the ulcer base to the depth of one-half the length of the last phalanx of the thumb. After the usual application of stomach clamps the gastrohepatic omentum and the gastrocolic omentum were opened as indicated in Figure 1, and with gauze protection the ulcer was freed from firm posterior attachments, in the doing of which I perforated the base, opening the stomach. The ulcer base was so adherent to the pancreas that I am inclined to believe perforation with adhesion had already taken place. The induration extended over and across the lesser curvature; I might designate the ulcer as a "turned saddle." Before the ulcer was excised the cavity of the lesser peritoneum was packed off as indicated in Figure 2, and as it was excised the stomach was lightly stuffed with gauze for further protection of the wound—also shown in Figure 2. Figure 3 illustrates well the line of sutures in the posterior wall; there were two continuous, a through-and-through (not the Connell) and an imbedding musculoperitoneal. Figure 3 also shows the closed gastrohepatic and gastrocolic temporary wounds for technic. Two large cigarette drains were introduced, each to the line of suture in the stomach wall and coming out, the one at the upper end of the abdominal incision and the other at the lower. Our patient has, to date, made a most excellent recovery.

The peculiar pains complained of may be explained by the posterior adhesions. The splenic artery runs along the upper border of the pancreas as a rule, but I have seen one case of fatal hemorrhage from a gastric ulcer which ulcerated into the splenic artery running within the pancreas tissue. Cases of fatal hemorrhage from gastric ulcer have been reported in which the ulcerated splenic artery was the source, but whether or not a variation in the usual position of the vessel was the reason, I am not informed. Brinton says that 58 per cent. of fatal gastric hemorrhages come from the splenic artery. The possible relation of an ulcer of the posterior wall of the stomach to the splenic artery would suggest extreme gentleness in the freeing of adhesions.

DEFINITE KNOWLEDGE OBTAINED BY MEANS OF THE X-RAY*

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While it is possible for an expert photographer so to alter *x*-ray negatives and prints that they may be made to represent almost anything, yet there can be no question about the *x*-ray's wide range of usefulness in solving the many perplexing problems with which the surgeon is continuously confronted.

* Read before the Western Surgical Association, Chicago, December, 1910.

Fig. 1.—This (Case 1) illustrates very well what was considered a fairly good result in fractured femur preceding the time of the *x*-ray. Here we have not to exceed one inch of shortening in a lateral union of a square break. This fracture was adjusted by several physicians and thought to be in perfect position.

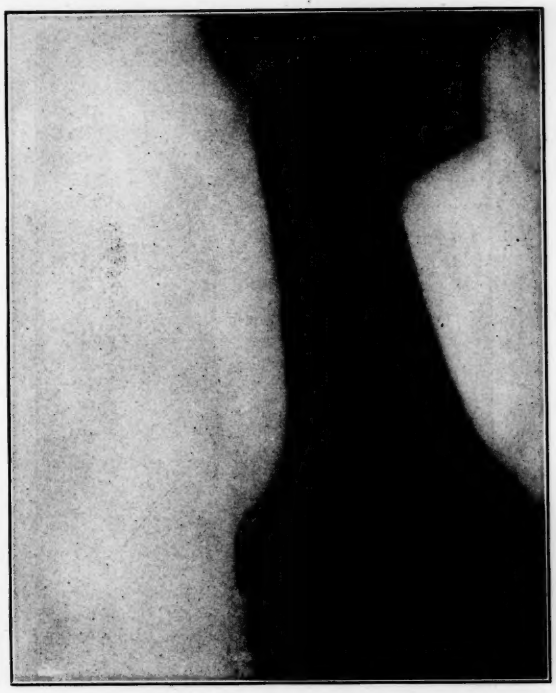

Fig. 2.—Another view of fracture (Case 1) shown in Figure 1. While the patient has a very good result for a fractured femur, yet it is not quite what we should expect with the aid of the *x*-ray. In this illustration and in Figure 1 the outlines of the bone have been reenforced in order that they might be clear after reduction and reproduction.

Fig. 3.—Double compound fracture of tibia and comminuted fracture of fibula. This (Case 2) shows how necessary it is to take exposures from two or more directions in order to have a correct understanding of the existing deformity. This patient was injured in an automobile accident and escaped with only his life; he sustained other serious injuries besides the one here shown. Owing to the shock and other conditions present it was thought best not to operate on him and readjust the fragments as they should be. The main efforts were exerted to save his leg from amputation. This was accomplished by the aid of an ambulatory splint and the application of plaster-of-Paris molds.

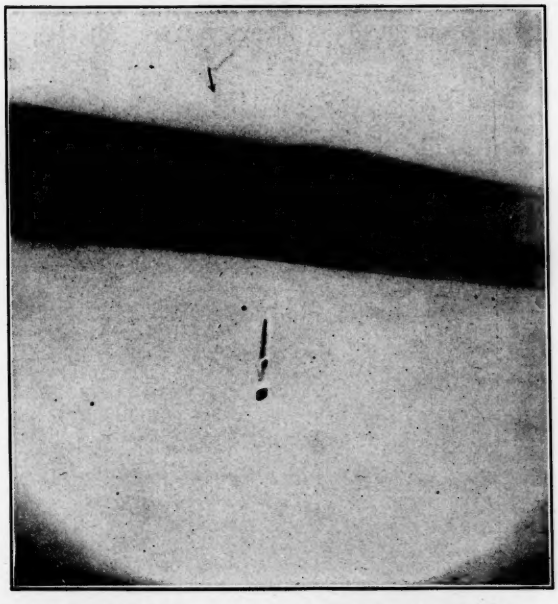

Fig. 4.—Lateral view of double compound comminuted fracture of tibia and fibula (Case 2). The patient now, six months after accident, is walking on the leg without any apparent evidence of shortening. He has discharged some small pieces of bone and has experienced a rather protracted disability, but the result seems as good as we could have obtained by an operation so far as usefulness is concerned. New bone has bridged across the gap caused by the displaced fragment of bone, the fragment has grown to the new bone and the whole leg seems strongest at what would appear to be its weakest point. In this and Figure 3 also the outlines of the bone in the radiograph have been reenforced.

XUM

Fig. 5.—Fracture and partial dislocation of left elbow (Case 3). Arrow 1 points to detached external condyle and Arrow 2 to internal condyle. Arm is still in splints after a labored effort by two good physicians to adjust break without operation. This adjustment is probably as good as it could be without an open operation.

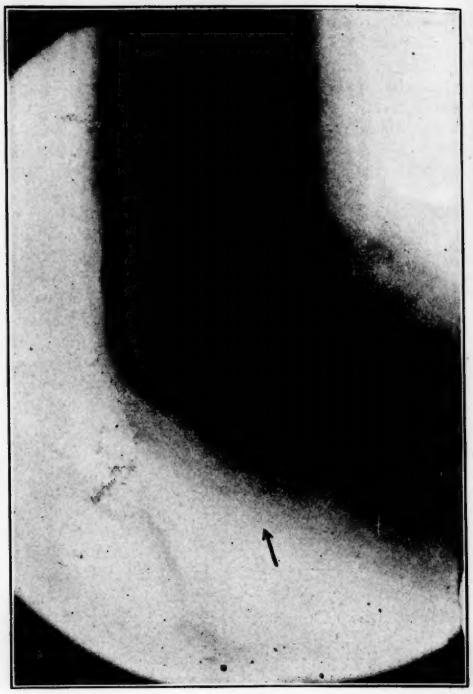

Fig. 6.—Lateral view of same fracture (Case 3) of both condyles before wiring, upper fragment protruding through skin. The outlines of the bones have been reenforced in this set of radiographs also.

Fig. 7.—Same elbow (Case 3) after adjustment and wiring condyles in place. It was necessary to open elbow by incisions in three places and tissues were elevated so we could see clear through arm in front of bones. One incision was made where bone had penetrated through skin.

Fig. 8.—Lateral view of same fracture (Case 3) after wiring. Elbow was put in splints and kept quiet for six weeks, no passive motion being permitted until inflammation had entirely subsided. Four months after injury boy has full use of arm.

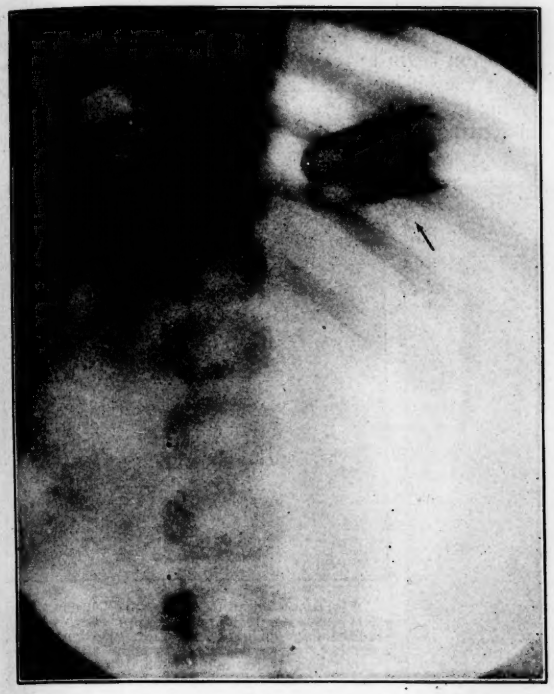

Fig. 9.—A girl, 8 years old (Case 4), swallowed a fence staple. A skiagraph (not reproduced here), taken three hours afterward, showed the staple being churned about in the stomach. This shows the staple about to leave the stomach. Here the staple made a half turn while being radiographed and we have a double view of it. In this set of pictures the outlines of the staple and some of the bones have been reenforced.

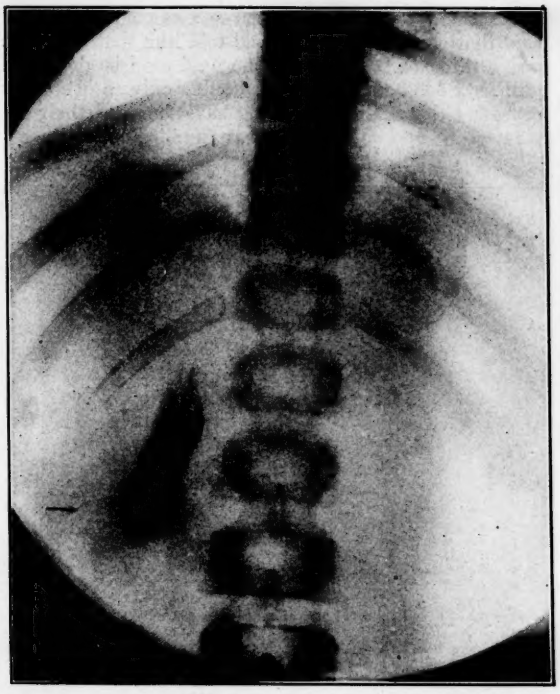

Fig. 10.—This shows the staple traversing the descending duodenum on the opposite side of spine from Figure 9 and down below last floating rib. The staple was not aided in its progress by any form of treatment. Here we also get a partial double view on account of the peristaltic action of the bowel.

Fig. 11.—Staple in ascending duodenum about the duodenojejunal juncture; it has almost completed a circle; this is also a double view. Figures 9, 10 and 11 were all taken during the same hour, showing the speed with which such things travel. The staple then had traveled from the upper right-hand corner to the jejunum in one hour's time, or in four hours after being swallowed.

Fig. 12.—This was taken thirty-six hours after Figures 9, 10 and 11, and shows the staple to better advantage, evidently because it was more stationary. No treatment was given the child except an enema, thirty-nine hours after the staple was swallowed, when the staple was washed away. This plate was exposed to the *x*-ray nine seconds. It appears as though the staple had turned around in the large bowel, but it was evidently proceeding arch first and was about to make the loop of the sigmoid.

XUM

An agent for one of our large *x*-ray houses recently said that certain physicians had told him that "the *x*-ray was a thing of the past and it would soon be done away with." Such conclusions can be due only to one of two causes: either these physicians have fumbled their own *x*-ray work or some one else has fumbled it for them.

troubles just begin. When you have spoilt about two or three hundred plates and punctured half a dozen tubes you begin to realize how little you really did know about the business in the beginning. I spent six years trying to take a picture of a hip-joint before I succeeded in getting one that I would dare exhibit without an

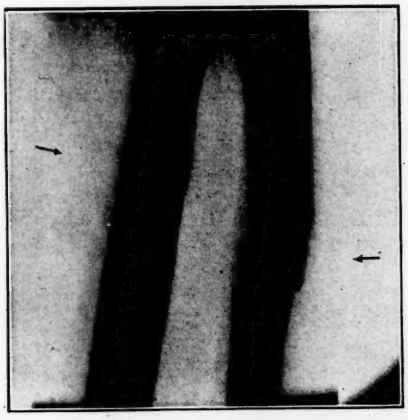

Fig. 13.—Fracture of both bones of forearm (Case 4). Here we have quite clearly demonstrated a condition in fractures of two bones parallel to each other in which it seems almost impossible to secure a perfect coaptation without an operation, because when one bone is perfect the other is out of adjustment, and if the second bone is perfect the other is out.

Fig. 14.—Simple fracture of lower third of right tibia (Case 5), which at first glance appears to be a comminuted fracture. The diamond-shaped piece of bone in reality is a part of the main bone, the white mark all around it being caused by the peculiarity of the break.

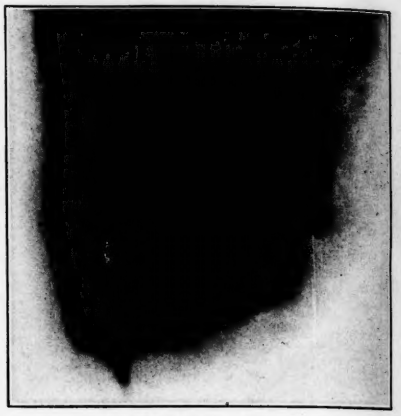

Fig. 16.—Amputated leg (Case 7), fibula being left half an inch longer than tibia with an additional spicula projecting one-fourth inch further. This leg gave trouble until reamputated and bones made even, which shows the importance of making bones even. If either bone is to be left long it should be the tibia, because it is the larger and the bone that bears the weight of the body, the fibula being only a brace.

Some one has well said: "To read the report of finding a renal calculus, a tuberculous hip or a frontal sinus disease is one thing; to realize the long road of failure and discouragement which the writer traveled to reach that end is quite another." The man who sells you the machine tells you that it will take any old thing at any old time; he puts it in and shows you how it is done; after he is gone your

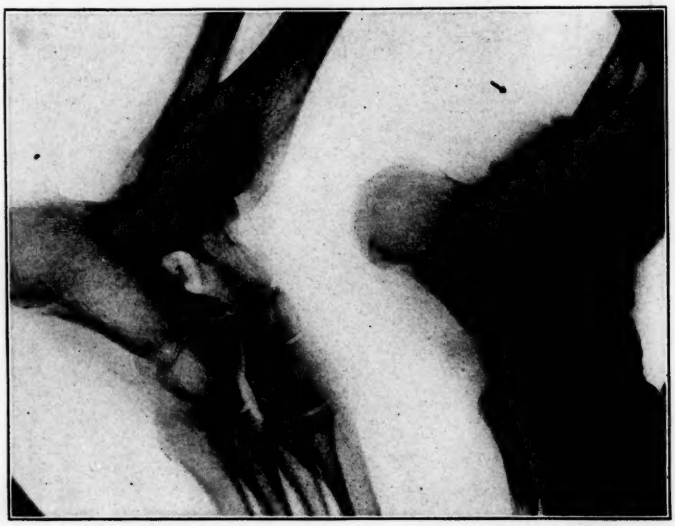

Fig. 15.—Normal ankle on left and sprained ankle (Case 6) on right with particles of tibia broken off. Such injuries tell the reason why some sprained ankles do not recover rapidly, there being a fracture in addition to the sprain. These breaks are always overlooked without the aid of an *x*-ray. The two views demonstrate how it is possible to develop a negative so that all the soft tissues and even the tendons disappear, the single foot view showing a shadow of the tendo Achillis. The outlines of the particles of broken tibia on the right have been strengthened for fear they would not otherwise show in the reproduction.

apology. Some one has said that "not failure, but low aim, is crime."

The *x*-ray is no longer estopped by the query whether these things can be taken; it is now only how well they can be taken; that is, radiography is a highly developed art.

Much of our work previous to the *x*-ray was problematical. A fracture would be adjusted so that the part looked all right to the naked eye and allowed to go at that, but to-day it is different. After the fracture is adjusted an *x*-ray is taken, and if the bones are improperly adjusted the fracture is treated accordingly. Time was when a surgeon might say that an injury to a joint was a simple sprain and stick to his opinion without fear of contradiction, but to-day he may be forced to change his opinion when confronted by the *x*-ray findings. It is surely a great source of satisfaction to be in practice in the present age as compared with the many uncertainties which existed in the practice, say twenty years ago.

In fractures the *x*-ray shows us, many times, a very imperfect adjustment of the bones in what had seemed a perfect adjustment when examined without the aid of the *x*-ray. Frequently amputations refuse to heal and it is not always possible for one to say why, without the aid of an *x*-ray. A small piece of bone may have been left in rounding off the edges of the bone; or it may be found that the bone was left long when it should have been short. The case shown in the collection here (Figure 16) is a very good illustration of how this happens. Here the sur-

geon, no doubt, thought that the bones were even; but instead the fibula is half an inch longer than the tibia with a sprig of bone extending down fully half an inch further; this constantly gave trouble until removed. A condition like this may be ascertained without the *x*-ray in a thin subject, but in the average individual it would be rather difficult, previous to operation.

The course of the ureters can be outlined when they contain metal catheters; the stomach can be clearly outlined when injected with bismuth and the work on the thoracic cavity, so beautifully worked out by Beck, makes the knowledge we may obtain with the *x*-ray very extensive. The aid which the *x*-ray bears to a correct diagnosis (within its limits of course) cannot be underestimated. Many of these points, thus hastily referred to, are illustrated by the accompanying radiographs and case reports.

The *x*-ray, when in good working order, is one of the most valued adjuncts to good surgical work we have at our command. It helps to make surgery a more exact science. It gives us a much clearer understanding of our cases and will, eventually, lessen to a great extent the vast number of cripples that were unavoidable previous to the time of the *x*-ray.

A CERTAIN AND SIMPLE METHOD OF OBTAINING THE KNEE-JERK

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LOUISVILLE, KY.

In the study and investigation of neurologic cases, I am constrained to believe that the knee-jerk or patellar tendon reflex, correctly obtained, is one of the most important tests, if not the most important, in a great variety of cases. It is certainly a test that the general practitioner should more frequently make in the ordinary routine examinations of his practice. Perhaps not everyone is aware that the knee-jerk is often present, but inhibited by the patient, and that any method that will insure a correct response is well worth consideration. I have found it practically impossible for a patient to inhibit the knee-jerk if the method here described is employed. It was in an endeavor to prevent this frequent occurrence that the following plan was evolved.

The patient, male or female, should sit in an ordinary straight-backed office chair, relaxing the entire body as far as possible. The feet are then pushed forward so as to extend the lower limbs comfortably. This position produces complete relaxation of the flexor groups of muscles of the lower limbs, and, as it is these groups of muscles that inhibit the response, it seems rational to believe that the inhibition would be prevented.

With the limbs in the position indicated, and with the ends of the toes of both shoes on a line, the clothing is drawn reasonably snug over the patella with the thumb and forefinger of the left hand in right-handed individuals. The three remaining fingers and the palm of the hand should rest on the thigh just above the patella. With a percussion hammer a gentle tap is given the tendon and its response or the absence thereof can be both seen and felt, for the palm and three fingers of the left hand will give an excellent index of the prominence and activity of the response.

In this position, reinforcement is most satisfactorily performed, and a wider range of action obtained.

I have been unable to find a description of this method and, therefore, believe it to be original. It has stood me in good stead in some cases in which it was very important to know the presence or absence of this reflex.

115 West Chestnut Street.

A DRUM-SPINNING ATTACHMENT FOR AN ORDINARY KYMOGRAPHION

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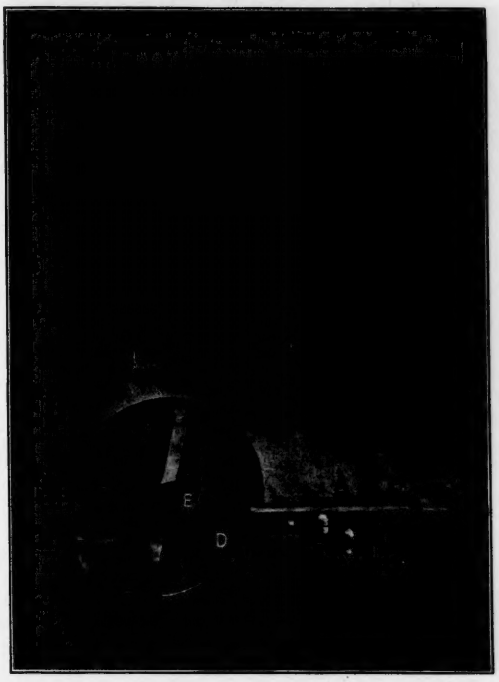
ST. LOUIS

This attachment can be fastened to the base of a Harvard Apparatus Company's kymographion by means of a single thumb screw, as shown at *A* in the illustration. The device is "set" by pulling out the plunger by means of the ring *B*. When the knob *C* is pulled the drum will be spun around rapidly for one revolution and then stopped in exactly the same position as that from which it started. The writing-points of all muscle levers,



Drum-spinning attachment for an ordinary kymographion.

tuning-fork. etc., remain constantly on the even surface of the drum paper. The plunger can be at once "set" and the drum spun again as many times as desired, thus allowing superimposed curves to be taken on the same base line. A set-screw *D* can be adjusted to regulate the speed at which the drum spins. A special clamp *E* fastened to the lower part of the drum permits it to be firmly clamped on to the drum spindle. With slight variations in regard to the attachment this device may be used on any ordinary kymographion. It is generally desirable to fasten the kymograph down to the table by means of a small hand clamp.

This spinning device was made for me by Mr. Paul Bauer, mechanician for the Washington University Medical School. It answers the same purpose as the pendulum, or spring myograph, with the added advantages that it is smaller, cheaper, and much more easily and conveniently manipulated by students.

XUM

THE X-RAY TREATMENT OF RINGWORM OF THE SCALP

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Physician to the New York Skin and Cancer Hospital, Consulting Dermatologist to the Randall Island Hospitals, Consulting Physician to the New York Hospital

NEW YORK CITY

Although I have not heretofore attained all the success which could be desired with the *x*-ray treatment of ringworm of the scalp, I was so profoundly impressed with the results observed during a recent trip to London and Paris, that I do not hesitate to urge this plan of treatment when it can be properly carried out. As is the case, however, in many matters in medical and surgical practice, the personal equation and the experience of the operator are great factors in success in the employment of the *x*-rays; but with sufficient care and vigilance, dexterity can be secured by many in the use of this remedy, and the best results obtained.

Ringworm of the scalp is often regarded too lightly. While certain recent cases may yield readily to various forms of treatment, and while the disease tends to pass away at puberty, no one who has had much to do with ringworm of the scalp among poor children or in public institutions will underestimate its seriousness, or scorn any measure which offers a prospect of a speedy cure of this rebellious affection.

Fig. 1.—Child prepared for *x*-ray applications to whole scalp. The applications are made at right angles to the points A (toward the forehead), B, C, D and E.

In New York City, children with ringworm are very properly excluded from the public schools. When it gains a foothold in asylums it becomes a veritable nuisance and even a scourge, involving great care and expense in the segregation and treatment of those afflicted; of this I have had personal experience on many occasions. In some of the city institutions it has been very prevalent at times, and in the hospital on Randall's Island there are always many hundred children with ringworm, some of whom remain months, and even years uncured, in spite of intelligent medical treatment and faithful nursing.

In Paris, some time ago, ringworm became so prevalent that there was established in the Hôpital St. Louis a special school, with instructors, where several hundred children were kept under treatment, as it was found impossible to check the disease by out-patient management. It was here that Sabouraud made his remarkable studies, which have thrown so much light on the subject, and here that he developed and systematized the treatment now under consideration. The result of this has been that, whereas there were at one time large numbers of children under his care, about 300, I understood that, when I was visiting the school recently to study the process of cure, there were only about fifty in the school. The numbers of affected children have steadily diminished, and the disease is largely stamped out in Paris by means of *x*-ray treatment, some thousands having been thus treated.

In London, ringworm became so prevalent and obnoxious that the Metropolitan Asylums Board created what is known as the "Downs School," in the country at Sutton, in Surrey, about fifteen miles distant from London, where children affected with ringworm were sent from the various public institutions under its charge. From the first, it was placed under the medical care of Dr.

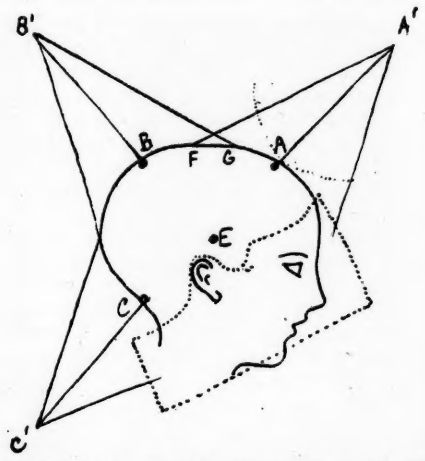

Fig. 2.—Points A, B, C and E receive each a full pastil dose. A' F, B G indicate the angle at which rays from A' and B' fall on scalp, and the distance from the source of the rays as compared with the normal distance A' A and B' B. The dotted line represents the sheet of lead used to protect the ear and face when point E is *x*-rayed.

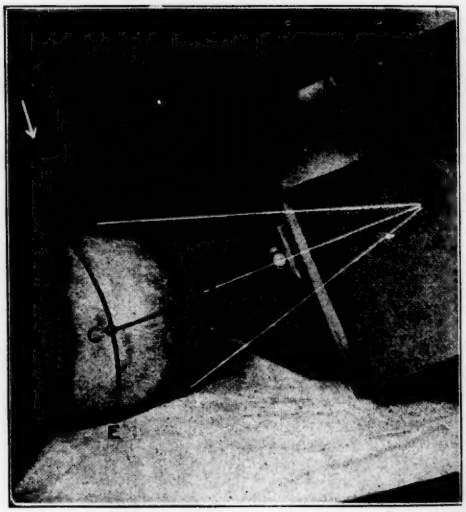

Fig. 3.—Box-shield in position for *x*-ray application to upper occiput (B). The white lines indicate the direction of the rays through the aperture in the box. The white arrow indicates the direction in which the dose is to be aimed when the left side of the scalp is being rayed. The ear and side of the face is then covered by lead-foil as in the diagram (Fig. 1). Similarly when C is rayed the neck and back are protected. (The pegs here shown were found to be somewhat too thick and have since been made more slender.)

Colcott Fox, of London, who gives all day Saturday to the work, and through whose courtesy I was enabled to spend considerable time there, examining the children and watching the method of treatment. The direct *x*-ray applications were given by Dr. H. O. Adamson, who has done much to make this mode of treatment effective; he also spends all Saturday there, and another man does *x*-ray work on two other days of the week, all with skilled nurses.

The institution consists of six dormitory buildings, holding seventy patients each, with other buildings for administration, schools, laundry, electric plant, etc. The dormitories have been full much of the time, with over 400 children, but of late they are less crowded, as the disease seems to be well under control. Several thousand children have been treated and cured there, almost 1,000 in 1909, and 598 up to July 16, 1910. On July 9 forty-five were admitted and thirty-one discharged, and thirty-two were discharged on July 16, admission being only every two weeks. The children stayed in the schools about three months each, and were then returned to the institutions from which they came. As they were all under the continual care of the Metropolitan Asylums' Board, in other institutions, they were under constant observation, and the authorities were in a position to know if there was any return of the disease. I was, therefore, greatly interested to learn that it was the rarest thing to have a child sent back for treatment, and my inspection of the books showed that this very seldom occurred.

The same treatment for ringworm of the scalp has also been carried out on a large scale by Dr. J. H. Sequeira, in the out-patient department of the London Hospital, where there is a most elaborate and excellent *x*-ray outfit, at one time thirteen nurses being employed. There had been about 2,000 ringworm cases treated since July, 1906, and 580 during the half year ended July 1, 1910.

A very intelligent nurse brought some new patients while I was there; I asked her how many children she had brought from her institution, and she replied "about 200." I then asked her how many she had brought back uncured, and she said, not over two or three of the entire number.

There have been also reports from others who have made extensive and successful use of this method of treatment. My personal observation was quite enough to satisfy me that we have in this method the means of controlling a disease which has hitherto been the source of vast annoyance to physicians and managers of many public institutions.

When the claim was first made in the medical journals that obstinate ringworm could be cured with a single application of the *x*-ray I was incredulous, and although treatment by the *x*-ray has been used for some years in the New York Skin and Cancer Hospital, I have to admit that I do not know of any cases which have been cured by a single exposure; and I now believe that the fault has been in the technic of the operation, for the testimony obtained in Paris and London was that this was almost invariably the case.

It is not necessary here to make any extended remarks on the different forms of ringworm of the scalp, or on the diagnosis, which can be so easily established by the microscope, but only to state that all forms of the disease, and also favus,[1] seemed to yield to the right administration of the *x*-rays. The secret of success lies in securing a proper strength and duration of exposure which shall effect complete depilation of the hair, no more and no less; and this is secured by means of a radiometer, the most practical of which is that known as the "pastil of Sabouraud." These pastils consist of small discs of cardboard, coated with a yellow preparation containing platino-cyanid of barium; they are exposed to the *x*-rays during the treatment until they change to a pale green color, corresponding exactly to a test scale accompanying them.

There are, of course, many elements to consider in connection with the operation of the *x*-ray which this is not the place to discuss; suffice it to say that no one should attempt the treatment here described without a good working knowledge of this powerful agent. It is to be remembered that the effects of the ray will vary with: (1) the intensity of the rays produced; (2) the distance of the anticathode, or target, from the treated part; and (3) the duration of the exposure. The intensity of the rays may vary in the same apparatus from day to day or even in the course of the same day, with the high or low tension in the tube, with the temperature, state of the barometer, action of the coil or static machine, thickness of the glass of different tubes, condition of the conductors, etc., so that a time exposure, as practiced by many, may be a very uncertain guide; unless, therefore, there is some efficient radiometer to measure accurately the amount of rays used, there is great danger of overdoing or underdoing the work, as will be mentioned later. This, however, can be accurately determined and regulated by the pastil of Sabouraud.

The distance from the anticathode, or target, is fixed by Fox by means of three light wooden pegs, about 3 inches long, protruding from the tube-holder, which rest on the affected part; Sabouraud adheres to tubes made of metal or lead glass of various sizes, the ends of which rest on the scalp. Sabouraud makes the distance 15 cm. or 6 inches, and Fox 17.5 cm. or 7 inches.

Having, thus, the distance a fixed element, and the matter of the intensity of the application determined definitely by the change in color of the pastil, the duration of the exposure becomes a negligible quantity, provided that the pastil reaction is accurately attended to; but Fox has also clocks, one for each of three patients treated at the same time, which are set at the beginning of each exposure, so that after a certain number of minutes the pastil is removed and frequently examined, in comparison with the standard color to which it is to be changed.

The pastil is inserted at exactly one-half the distance from the anticathode to the scalp, 7.5 cm. or 3 inches from the former by Sabouraud, and 3½ inches by Fox. In the apparatus employed by Sabouraud, the pastil is made to adhere to the plate holding the metal or glass cylinder for localizing the *x*-rays, which thus has to be wholly removed each time it is inspected. In the apparatus used by Fox, the pastil is applied on the end of a plug which is inserted in the proper position, and so can be removed much more easily, without disturbing the apparatus.

The time occupied by an exposure necessary to change the pastil correctly, as practiced by Fox and Adamson, (from 20 to 30 minutes) surprised me, for it was more than I had been accustomed to allow in such cases. Sabouraud states that by using very hard tubes he had been able to reduce the exposure to about six or seven minutes for each sitting, but he had arranged matters so that the usual sittings last from ten to fifteen minutes, according to external conditions of the atmosphere, the tubes, etc.[2] All of them use quite a small tube made by Drisler, which has a wonderful endurance; running

1. At the meeting of the British Medical Association in London, in July, 1910, Dr. Daily reported in regard to the treatment of favus at the special school established by the London County Council for these cases in Frick Street. One hundred and fifty children had been admitted, eighty-two of whom were treated with the *x*-ray with one single application, the entire scalp being covered in five exposures by the method advocated by Adamson. The treatment was perfectly successful.

2. Brit. Jour. Derm., 1906, xviii, 207.

eight hours daily they will often last for from two to six months. Sabouraud used a static machine until recently, when he introduced a coil; he now employs both; both Fox and Sequeira use coils.

I could not learn just how it was that the time of exposure by Fox was so much longer than the exposure by Sabouraud, but it had to do, of course, with the apparatus employed. The experience of all the workers was, however, that the pastil (when it was genuine and correctly employed) was to be relied on, and represented the dosage of *x*-rays which the average skin will stand, whereas less than the measure of a pastil dose was inefficient to produce complete depilation, and would not effect a cure. They told me that they did not recognize idiosyncrasies as to the effect of the *x*-ray on different skins, and did not find it necessary to vary the dosage for different patients. Adamson[3] says, however, that some pastils are more sensitive than others, and recommends only those obtained from the original makers (Drault, of Paris) and then only with the "B tint" which accompanies the book of them, since the "B tint" was apparently not a fixed standard, but was adjusted to each series of pastils.

For the proper employment of this treatment it is necessary that the hair should be cut very short with a clipper, and it is commonly wise thus to clear off the entire scalp in order also to detect small incipient patches, which might be overlooked and so protract the cure. When there are but few patches these can be treated by isolating them with localizing tubes of proper size, or lead shields, but when there are more than five scattered patches the rule is to depilate the scalp completely by means of the *x*-rays. Sabouraud accomplishes this in ten or twelve exposures, covering each circle that has been treated with a disc of lead foil, so that the rays shall not touch it again.

Adamson[4] has presented a simplified method of depilating the entire scalp with five exposures, which I observed to work so perfectly that I shall describe it as briefly as possible, presenting his illustrations, with his kind permission. The object of the method is to make applications of the *x*-rays at five different points of the scalp, in such a manner that while the areas of exposure encroach on each other, the rays fall at such an oblique angle that there is no injurious effect from overlapping, but each and every portion of the scalp receives the full pastil dose of *x*-rays; so that the areas which have been treated are not covered with lead foil, as by Sabouraud.

The location of the several applications is shown in the accompanying illustrations. The hair being clipped short over the whole head, five points are marked on the scalp with a blue skin-pencil: A, in the center line, from 1½ to 2 inches within the frontal margin of the hairy scalp; B, near the center of the crown, five inches back of A; and C, just above the lower border of the hairy scalp, which should also be 5 inches from B; at the sides of the scalp D just above and in front of the left ear, and E just above and in front of the right ear. These points should also be 5 inches from the center line. The points are then connected with lines made by a blue pencil, which should meet each other at right angles (Fig. 1).

A Sabouraud pastil dose is given over each of these points A, B, C, D and E in succession, beginning with B, in such a manner that the point is the center of each area rayed, and the anticathode at a distance of 6 inches is vertically over the point, and so at right angles to each of the other applications (Fig. 2); the forehead, nape of the neck, the ears and side of the face must be protected with lead or rubber when exposed to the rays. Most of the applications are made with the patient lying down (Fig. 3). The aperture in the box through which the rays pass is 3 inches in diameter, and 3¼ inches from the anticathode, so that the rays diverge, at the head, to a circle 6 inches in diameter. Care must be taken in applying the rays at A, E, C and D to have the center of the area over the point indicated, so that about half the dose goes on the scalp, and much of it on the shield protecting the face, ears and neck, otherwise there will be an overexposure somewhere.

When Adamson's account appeared nearly two years ago, he had used this method in seventy-five cases with perfect results; as I observed its workings it was excellent. Since that time he must have treated hundreds of other cases in this way, for a large share of the children in the Downs School had the entire scalp depilated for extensive ringworm by this method.

The effects of the application of *x*-rays in these cases are very interesting. There are, of course, no visible results from the exposure at once; at the end of about seven days there may be a slight erythema, but generally not, and nothing occurs until about two weeks after the operation, when the hairs begin to fall with the slightest traction, and within a week later the process is in full operation. By the end of a month from the time of exposure, the scalp is pretty well bared; the roots of the hairs are found to be atrophic and their points sharpened. The hairs affected by the trichophyton are the last to fall, and must be removed by daily washing with soap. Fox washes the head every day, from the beginning, and keeps the scalp lightly anointed with a carbolized petrolatum, which prevents the affected hairs from carrying the disease. Sabouraud treats the scalp from the first day of the operation to the end, with a daily application of a weak tincture of iodin: tincture of iodin (freshly prepared) 1 part, alcohol 9 parts.

The diseased patch, or the whole scalp when treated, remains bald for a month or two, when it becomes covered with fresh hair (lanugo), and within from three to four months, if the process has been properly carried out, the hair will have regrown well, with no trace of the parasitic disease.

In the Downs School, where I had the opportunity of observing large numbers of children at various periods after the single application of the *x*-rays, it was possible to verify the facts above stated to a nicety. The children were returned to their various institutions when the hair was partly regrown, and when Dr. Fox, who examined each child minutely, was satisfied that there were no remains of the parasite on the originally diseased patches. This generally occurred at about the end of three months from entrance, and as already stated, thirty-one children were discharged one Saturday, and thirty-two a week later. Ordinarily, it is better to determine the cure by accurate microscopic examination of the débris scraped from the site of the patches, after being soaked with equal parts of liquor potassæ and glycerin, but with Dr. Fox this had become unnecessary, and, as stated, the results proved the correctness of his judgment and sufficiency of the treatment. As already mentioned it was the rarest thing to have a child readmitted, although being still in various institutions very great care was naturally exercised against recurrence.

A few points remain yet to be considered. It is possible that in certain cases the *x*-ray may not have been given to the full pastil dose, from error in judgment of

3. Brit. Jour. Derm., 1906, xviii, 183.
4. Lancet, May 16, 1909

the operator as to the change in color of the pastil, and depilation may not be complete in the affected patches. This cannot be determined at once, and only after the expiration of at least a month should a second application of the *x*-ray be made; this necessity, however, seldom occurs in skilful and experienced hands. Then, again, if the proper dose of *x*-rays, as regulated by the pastil, has been much exceeded, one of two untoward results may follow: (1) there may be a burn, of more or less severity; or (2), permanent alopecia may result. Fortunately, the former rarely if ever happens now, except with very unskilful handling of the rays, and occurrence of alopecia is also very exceptional. I was told that permanent baldness had happened a few times in the very earlier trials of this method in London, but not in later years. I know of one case in New York in which the hair did not come back over a localized area, but this was from repeated use of the rays in unskilful hands. If the hair does not grow within six months the alopecia will be permanent.

Some question has arisen in regard to the possible effect of *x*-rays on the structure or functions of the brain, and this was the subject of a special discussion at a joint meeting of the dermatologic and electrotherapeutic sections of the British Medical Association;[5] the conclusion was unanimously reached that in the many thousands of cases in which the *x*-ray method had been practiced this had not occurred, and that "they might regard the specter of brain trouble as abolished." There was not even headache after the prolonged and repeated exposure to the *x*-rays in operating on the entire scalp, though some think it not desirable to employ this treatment in children under the age of 3 years.

As for the mode in which proper *x*-ray treatment cures ringworm of the scalp, all are agreed that it does this solely by effecting a complete depilation, and that the parasites are in nowise killed by the *x*-ray, in the doses used. The trichophytic hairs are liable to spread the disease, but the contagiousness of the patient ceases when they have all fallen, a month or so after the exposure to the *x*-rays.

Sabouraud[6] makes some interesting remarks concerning the gain, financial and other, which has been accomplished by the perfecting of this method of treatment of ringworm of the scalp. In these he shows that whereas before 1904 there were 300 beds in the Ecole Lallier, at the Hôpital St. Louis, occupied by these patients, whose stay averaged over two years each, he has reduced the number to 100, and the average time for a cure to a little over three months; and whereas, in 1903 there were 110 discharged cured, he now discharges more than 500 annually. The cost of each child for a cure was originally about 2,000 francs, whereas now it is but 260 francs, effecting a saving of between 300,000 and 400,000 francs annually to the government.

In conclusion, I am well aware that much that I have written is well known to many, and that the value of the *x*-ray treatment of ringworm of the scalp is accepted by most if not all dermatologists, but I cannot help feeling that this really great advance in dermatology is not thoroughly appreciated by the profession, and that the technic is not so understood that the best results are commonly obtained. Undoubtedly in recent cases good results can often be secured by the older, well-known remedies, but long experience in public practice and institutions convinces me that there are multitudes of cases in which the disease remains uncured for very long periods, being held partially in check by treatment of various kinds. From what I saw in Paris and London I know that the treatment here described is thoroughly effective.

It is recognized that there are objections to the treatment, in regard to the perfect baldness of patches or of the entire scalp, which must be endured for six weeks or so; but certainly the prospect of a cure in three months, instead of over two years on an average (as under the skilful treatment in the Hôpital St. Louis in Paris, prior to 1904), warrants endurance of this relatively trifling annoyance. Sabouraud,[7] after studying the disease microscopically for many years, wrote in 1896: "Not only is there no curative treatment known for tinea tonsurans, but I believe I am authorized in saying that no antiseptic treatment whatever will be found in the future capable of accomplishing this end. For even if we vary the chemical nature of the antiseptics, that would hardly change their power of penetration, whether solid, liquid, or gaseous they would always meet the same obstacle, that they could not penetrate deep enough. The root of the hair is inaccessible to external antiseptics."

It was this conclusion which led him to experiment with various methods of depilation (for the hair cannot be epilated mechanically, as it breaks off), and as a final result we have the method now described which has given such brilliant success in thousands of cases, at the hands of many careful observers who vouch for the results.

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5. Brit. Jour. Derm., 1909, xxi, 394.
6. Sabouraud: Les Teignes, Paris, 1910, p. 804.
7. Sabouraud, Les Teignes, Paris, 1910, p. 770.

THE PRESENT STATUS OF THERAPEUTICS AND THE SIGNIFICANCE OF SALVARSAN *

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The value of salvarsan is being discussed at present almost exclusively by syphilographers and simply as a new remedy for syphilis. From this point of view the verdict as to its importance will depend on its efficiency as a therapeutic agent compared with that of mercury, whether it is more efficient or at least as good as that old specific remedy. General medicine, however, offers another point of vantage. Salvarsan is not simply an additional remedy for syphilis; it marks an epoch in medicine. This, I believe, will remain true, even if it be finally established that for syphilis this new remedy falls short of the old ones. Salvarsan presents a new departure and a new principle in therapeutics. It is from this point of view that I wish to make my remarks on the therapeutics of salvarsan. In order to elucidate my position, however, permit me to present in the first place a brief outline of the rapid fall and the slow rise of therapeutics during the course of the new medical era; this will assist us at the same time in the understanding of the present status of therapeutics.

For many hundreds of years practitioners of medicine lived in the bliss of ignorance; they were sure that they cured diseases—that the recovery of a patient was due to the drug which they administered. With the dawn of the new era in medicine, some seventy or eighty years ago, there came a sudden awakening—at least for a good many: the confidence in the action of drugs and therapeutic measures was shaken to its foundation. One of

* Read at the opening of the symposium on salvarsan at the annual meeting of the New York State Medical Society, April 18, 1911.

the most potent factors in this upheaval was the success of homeopathy: if patients can get well, it was argued, with such infinitesimal doses of drugs, they probably do get well without the assistance of any drugs and sometimes perhaps even in spite of the drugs. A remarkable situation now arose. While it is as clear as day that the practice of medicine has a right of existence only by the help which it can render to the sick, medicine of that day decided to go ahead without therapeutics. Pathologists began to establish anatomic changes corresponding to every disease, and clinicians diligently and conscientiously studied the symptoms of diseases by which these changes could be recognized during life. The interest of clinicians began to center preferably in such diseases as would lead to a confirmation of the diagnosis by a post-mortem finding. Thus the subject of therapeutics was relegated completely to the rear, and for a long period no man of standing in the science of medicine devoted his time to the study and furtherance of this most necessary branch in medicine. We know the anatomic changes which take place in diseases, said the celebrated Skoda; we can diagnose diseases, but we cannot cure them. We all know that even in our day we have not a few who still profess the same dangerous fatalistic doctrine.

Permit me to say here in parenthesis that the intimate coalition of pathologic anatomy with clinical medicine led to another serious result: the identification of the pathologic changes after death with the preceding disease. This, too, is a misleading and dangerous conception. The pathologic state after death is only a consequence of the disease and not the disease itself. Disease in most cases is not a state, but a process, a functional disturbance which may lead to permanent anatomic changes, if not intercepted in time. I say it here because it cannot be said often enough, and because of the fact that functional disturbances are more readily amenable to corrections than permanent anatomic changes.

After a period of complete therapeutic nihilism the practice of medicine gradually began to recover from its shock. We need not dwell here on the development of surgical therapeutics, which was rather stimulated than hampered by pathologic-anatomic studies. Perhaps even in internal medicine the new pathology stimulated to new therapeutic activities by its dictum that disease is not a unit, an entity, but is a disorder, localized in various organs. At any rate, a method of treatment began to be developed which is directed against the disorder of organs and functions or against troublesome symptoms. In the course of many years, by diligent pharmacologic and therapeutic studies, a great many drugs were found and synthetically created which act on the kidneys, heart, gastro-intestinal canal, eyes, skin, etc., or relieve fever, pains, restlessness, insomnia, or supplant deficient secretions. The substitution method of treatment, although it relieves only the symptoms and must, therefore, be classed as belonging to symptomatic therapy, is a very interesting and valuable addition to modern therapeutics and is based on a new conception of the functional activity of some organs, that is, internal secretion. Besides the symptomatic therapy another method of treatment gradually grew up which is now known under the promising name of physiologic therapeutics. Perhaps even this method may have received a stimulus from another dictum of the new pathology, namely, that disease is nothing else but physiologic processes under changed conditions. The underlying principle of the physiologic method is to assist the sick man in getting well by all those means which keep the well man healthy and vigorous. Physiologic therapeutics lays great stress on the proper regulation of diet, air, water, light, exercise; on nursing, physical comfort and mental cheerfulness. All these therapeutic measures have as their aim, not the treatment of the disease, but, as stated before, the treatment of the patient, either to make him fit to resist the onslaught of the disease, or to make him at least comfortable while he is succumbing to it.

With the birth and development of bacteriology there seemed to be a new era in sight for therapeutics. The before-mentioned dictum of pathology that disease is not a unit was proved not to be entirely correct. It was established for various infectious diseases that each one was due etiologically to a well-defined microorganism. It seemed, therefore, plausible to expect that agents, capable of killing these organisms outside of the body, might prove to be efficient remedies for the disease produced by these organisms. A few years' experimentation, however, destroyed this hope; those germicidal agents when administered to the infected animal in sufficient quantity killed the host more readily than the virulent parasite. Yet, in the further development of the new branch of medical science, new, fundamental facts were brought to light and new means were discovered which enabled us in some instances to grapple, indeed, with the disease itself. I speak of the therapeutics of immunity, the principles of which I may perhaps state in the following manner. The old fact, which was disastrous to the old therapeutics, namely, that patients get well without any outside treatment, became the corner-stone for the new therapeutics. Scientists began to inquire into the method which the animal organism employs in dealing with diseases. And there it was found that one more claim of pathology was not entirely correct, namely, that there is nothing new in pathologic processes, that pathology is simply physiology under changed conditions. It was discovered, in the first place, that in diseases the assailed animal organism creates new products by means of which it tries to ward off the blows or even to destroy its assailant; and we have quickly learned to treat some diseases specifically by the very same new products. Either we borrow these products from one animal and give them to another which is short of its own ammunition, as in the case of antitoxins; or we try to stimulate the organs of the afflicted animal itself to a greater production of the defensive agents, as is the case when vaccine is used. We have thus acquired the means of treating specifically and effectively the disease itself or its chief cause at least in two grave cases, in diphtheria and meningitis, and perhaps also in tetanus.

Furthermore, in the course of these studies we have learned another very important fact, namely, that many phenomena which were considered as a part of the disease are actually a part of the attempt of the organism to cure itself. Here again we were quick enough to adopt this therapeutic procedure. Bier's method of treating chronic diseases presents such a brilliant instance. Hyperemia, which was considered as a sign of disease, is here employed as a therapeutic measure.

Let us take rapidly an inventory of our present therapeutic possessions. There are the two old remedies: quinin for malaria and mercury for syphilis. They are specifics indeed, but science and art have no share in their discovery, I shall return to them later. Since the rise of the new era in medicine three groups of therapeutic procedures were developed. 1. Drugs and meas-

ures to control or relieve symptoms of disease. 2. Physiologic measures to increase the resistance of the patients. 3. The reaction products of infected animals. The last-named group is beyond doubt one of the greatest acquisitions in therapeutics. But the extent of its usefulness will have natural limitations, which I shall not discuss here. As to the first group, I belong to those who believe that the control of symptoms is a very important factor in the treatment of patients and diseases. The attacks on the value of these drugs came from the anatomic school which never outgrew its therapeutic nihilism. Regarding the second group, I am ready to concede that there is a good deal of self-evident useful truth in the teachings of the school of physiologic therapeutics, but there is a glaring disproportion between the quantity and quality of its preachings. Furthermore, I am afraid that many of the medical apostles of the treatment of diseases by free water, free air, free speech and free press, are at the bottom of their heart therapeutic nihilists as far as drugs are concerned.

In still fewer words: We possess many drugs for treatment of symptoms of diseases, and we are well provided with good advice as how to treat the patients, but we have at our command extremely few remedies for the treatment of the disease itself or its chief cause. And what is worse: a great many of the better class of physicians are still dominated by the old fatalistic doctrine: You may study disease, you may understand it, and you may diagnose it, but you can never cure it.

Now let us look at salvarsan: what it is capable of accomplishing and how it was created. It is proved beyond controversy that salvarsan is capable of completely destroying in the animal body the spirochete of syphilis and of frambesia, the spirilla of European and African relapsing fever and the microorganisms of chicken spirillosis; in short, salvarsan is a specific remedy against a group of diseases caused by protozoan spirilla; it is a spirillocide. And it is not an accidentally discovered drug. We have here the first instance in the history of medicine of an efficient, specific, synthetic drug scientifically developed by the mental efforts of a single scientist. As a specific remedy and a drug it can be compared only with the two other specific remedies: mercury and quinin. I stated before that science and art had no share in the discovery of these drugs. Permit me to narrate briefly their histories. Regarding mercury it is known that corrosive sublimate and calomel were used for skin diseases by Arabian physicians as long ago as the ninth century. The gray ointment was invented in the thirteenth century and was used for the same purpose. When at the end of the fifteenth century syphilis broke out in Europe epidemically, the skin manifestations were treated as before by these mercurial preparations. When later it was recognized that these skin sores were manifestations of a specific disease, gray ointment, calomel and corrosive sublimate remained as remedies for syphilis; and so it went on for centuries. Wood introduced in 1854 the method of administering medicine by means of hypodermic injections; fifteen years later syphilologists began to administer mercury by this method and again corrosive sublimate, gray ointment (oil) and calomel were and still are the chief mercurial preparations employed in this manner. However much modern syphilologists may have contributed to the knowledge of the pathology and symptomatology of syphilis, it is quite evident that they have added very little of fundamental importance to our knowledge of its treatment. At any rate, neither syphilologists nor any one else can claim the credit of having discovered the value of mercury as a specific for syphilis. That knowledge was never discovered; it simply grew gradually in the course of many centuries and, let me add, in spite of violent opposition. For again and again the claim was set up by the antimercurialists that many of the manifestations which were considered as being due to syphilis were only symptoms of mercurial poisoning. Only within the last few years and before the recent salvarsan period, we find statements in the literature to the effect that the mercurial treatment of syphilis led in some cases to polyneuritis, to optic neuritis, to deafness and other affections of the nervous system. To this the syphilologist retorted that the affections of the nervous system in these cases were syphilitic manifestations and due to an insufficient treatment with mercury. Let me say here in parenthesis that we are now confronted with a well-known psychologic phenomenon, namely, that the persecuted readily acquire the methods of their tormentors. Some of our syphilographic friends proclaim now with great assurance that salvarsan causes optic neuritis, deafness and other affections of the nervous system.

Our knowledge of quinin as a specific remedy for malaria has a well-defined beginning. At about the middle of the seventeenth century the Countess of Chinchon, the wife of the Spanish viceroy in Peru, had malarial fever and was persuaded to use the bark of a Peruvian tree which the natives were in the habit of using for the same fever. After testing it first on a servant, she took the remedy and was cured. Her physician, del Vego, brought the remedy to Europe.

These histories show conclusively that science and scientists had nothing to do with the introduction of mercury and quinin as specific remedies.

I have said that the principles underlying the specific action of salvarsan were developed by the mental efforts of a single man. Before speaking of these principles and the various steps in their development, let me say a few words with reference to the personal element. To my mind that factor is of considerable importance for the future development of therapeutics. That science grows which attracts a large number of qualified enthusiastic investigators. In the past the gifted among clinicians were attracted by pathology and diagnosis. The pharmacologists studied the action of drugs on the organs of healthy animals. Neither of them studied the problem of how to cure diseases. Therapeutics did not attain the dignity of a science; the subject was often in the hands of men who did not enjoy the confidence of the discriminating medical savant. The investigator who gave salvarsan to medicine, however, is one of the keenest thinkers in medicine. For one-third of a century he has stood in the front rank of medical investigators and many of his contributions to medical knowledge are masterstrokes. Now this leader of leaders for a number of years bent all his energies to do for medicine that which medicine needs mostly, and that is to find remedies which could destroy the cause of diseases. These efforts were now crowned with a brilliant success. A chemical compound was synthetically constructed which fits exactly to a related group of pathogenic microorganisms, destroying them with one stroke within the animal's body wherever accessible. By the scientific position of the master and by his brilliant deed, therapeutics will rise now to a higher level in the estimation of discriminating medical men. That will help to attract to this field competent medical investigators, and therapeutics may become indeed a fruitful, a useful and a healing science.

Now let us look at the principles underlying the selective action of salvarsan. Ehrlich's chemotherapy is based on a few comparatively simple assumptions, some of which he conceived very early in his scientific life. Ehrlich assumes that a substance exerts a definite action on a living animal cell only when it becomes intimately connected with this cell or fixed by it. A cell, however, cannot fix any substance unless it has a receptor for it. The receptors for chemical substances Ehrlich calls chemoceptors. Various cells are provided with various chemoceptors. Hence when a chemical substance is introduced into an animal body, it becomes unevenly distributed among its tissues, on account of the difference in the affinities of the various tissues to this substance—the affinity of the tissue meaning the possession of specific chemoceptors for the corresponding substance. When the animal body harbors independent cells, for instance, pathogenic microorganisms, it may happen that only these organisms possess chemoceptors for the substance, or that they possess these receptors in larger numbers than the cells of the host. The result may then be that the substance would be fixed exclusively in these organisms or in much greater proportion than in the cells of the host. And if the union of the substance and the microorganisms would be of such a nature as to lead to the destruction of the parasite, the introduction of such a substance into an infected animal would lead to the extermination of the given parasite in that animal. Furthermore, when that substance is a compound, consisting of various, more or less firmly connected chemical groups, the entire complex might become fixed in certain cells, if the latter possess receptors for one of these groups. In this way a destructive group of a complex chemical compound might become active on a cell which possesses receptors only for one of its innocent partners. By successive attempts at introducing groups possessing receptors for certain microorganisms into a chemical complex possessing a poisonous group, a chemical compound may be finally created which would destroy the parasites and leave the animal host comparatively unaffected. Now that was the method by which salvarsan was created. But what an amount of ingenuity and strenuous endeavor had to be expended before this goal was reached! Ehrlich and his co-workers experimented first with trypanosomes. We shall not speak here of their work with dyes. The path which led up to the creation of salvarsan began with the studies of the arsenical preparations. Atoxyl was the first product which was investigated; but it was soon found that not only the trypanosomes, but also the nervous system of the infected animal, the optic and acoustic centers, possessed effective chemoceptors for this compound. Ehrlich soon recognized the true constitution of atoxyl, which permitted the substitution of various derivatives. And now the long and laborious studies began. At first arsacetin was reached, a promising compound which, however, was not yet free from affinities to the nervous system. The next much more satisfactory product obtained was arsenophenylglycin, which was the four hundred and eighteenth compound in the series. At this period Ehrlich's attention became more concentrated on the action of these arsenical compounds on spirilla. Arsenophenylglycin was found very active on the spirillum of relapsing fever. But still nearly two hundred more compounds were tested until the six hundred and sixth was reached. This product, dioxydiamidoarsenobenzol or salvarsan, proved to be ideal in its effects. It seemed to destroy completely the various forms of spirilla within the animal body. The nervous system of various species of animal hosts remained entirely unaffected by the drug. The curative dose formed in all instances only a small fraction of the toxic dose. Finally a single injection of the remedy accomplished in all the investigated animals and for all forms of spirilla a complete sterilization of the infected animal. Ehrlich laid great stress on this last fact, and for good experimental reasons. In the experiments with the other arsenical compounds and the trypanocidal dyes, it was discovered that the trypanosomes which escaped destruction rapidly acquired complete resistance to the destructive action of the remedies and then became ancestors of very resistant strains of parasites. In consequence of this experience it then became one of the aims of the chemotherapy to obtain a compound which would destroy all the parasites with one injection—*sterilisatio magna*. Such a compound was found in salvarsan; it destroyed with a single injection the various spirilla in various species of animals.

Salvarsan exerts some effect also on trypanosomes, but this effect cannot be compared with its action on spirilla. The same is apparently true also of the effect of salvarsan on the plasmodia of malaria. It seems that salvarsan exercises some general action on the protoplasm of various protozoan forms, but it holds more specific relations to the spirilla. The specificity of these synthetic products is one of the most promising facts. Highly interesting in this connection is the statement of Ehrlich that the arsenobenzol compound which is equally active on trypanosomes and spirilla becomes very active on the latter and indifferent to the former when iodin is introduced into this compound. It is evident that Ehrlich's method of creating synthetically, specifically active chemical compounds, offers great possibilities for future therapeutics. We ought also to remember the one statement of Ehrlich, namely, that he stopped temporarily at 606 because it was not necessary, for the present at least, to look for a still better preparation than salvarsan.

When we now turn our attention to human diseases which are caused by spirilla, we find in the first place that in relapsing fever one intravenous injection of salvarsan is sufficient to destroy completely all the spirilla and rapidly to cure the patient. This shows that the facts which were derived from animal experimentation hold good also for the human species, at least in such cases as relapsing fever, in which the blood is the main abode of the spirilla. It may be mentioned here that cases of filaria also seemed to have been cured by an intravenous injection of salvarsan. The problem, however, becomes complex when we come to judge the effect of salvarsan on human syphilis, for which we possess now quite a large literature. Not the least complicating element is the fact that a good many of the clinical writers on the subject are not sufficiently well trained in the methods of critical scientific observation. Another very disturbing element is the great bias of some of the authors. How else can the astounding facts be explained when one syphilologist states that he gave up the remedy after using it only in a few cases because of its comparative uselessness and of the harm it does to the central nervous system, while his colleague at the same institution reports with unbounded enthusiasm of the wonderful effect of the remedy in fourteen hundred cases of all forms of syphilis with comparatively little by-effects? Is it not further an evidence of glaring bias to ascribe an optic neuritis to the single injection of salvarsan and to leave out of consideration the effects of enesol and arsacetin, with which the patient was treated previously

to the salvarsan injection—especially of arsacetin, the damaging effect of which on the optic nerve is an established fact? Besides the complexities emanating from personal factors, we deal in human syphilis with a chronic disease. In some instances the spirochetes are undoubtedly enclosed, at least temporarily, in tissues, which for the time being, cannot be penetrated by the salvarsan solution. Furthermore, the method of administration of salvarsan is still in an unsettled state; it is insufficiently absorbed from some subcutaneous or intramuscular injections, and it is too rapidly eliminated, when it is injected intravenously. In spite of all these difficulties, however, the great mass of accumulated evidence establishes beyond a doubt that in human syphilis salvarsan acts in the same specific manner as in the experiments on animals; that is, it destroys the cause of the disease. The following clinical results are undisputed facts. It was found that with but few exceptions an injection of this drug causes disappearance of all accessible spirochetes. There are already a considerable number of cases on record, in which an early injection prevented so far the development of secondary manifestations, the time elapsed being in some cases seven or eight months. Syphilitic manifestations of nearly all forms and in all stages were profoundly affected by a single injection; there were only a few exceptions to this rule. There are a good many cases in which all the external manifestations disappeared without recurrence so far. These facts are surely sufficient to show that salvarsan acts on human syphilis in a definitely specific manner, that is, it destroys the cause of the disease. Its action is at least as specific as that of mercury on the same disease. It differs from mercury and has some advantages over it in the following points. Salvarsan destroys all spirilla; mercury affects only the spirochetes of syphilis. Salvarsan produces apparently antibodies in the blood as is shown by the effectiveness of the serum and the milk of those who were injected with it; there is no evidence of the formation of antibodies by mercury. The effect of salvarsan is much more rapid than that of mercury; one injection of salvarsan accomplishes in two weeks as much as repeated injections of mercury accomplishes in six weeks. Finally, whereas mercury is inimical not only to the parasite, but also to the host, causing cachexia of the patient, salvarsan, reversely, acts rather favorably toward the host; it stimulates to rapid healing and causes an increase of the weight of the patient. Careful future studies will bring to light any further quantitative and qualitative differences between the actions of the two specifics for the same disease and will determine the conditions in which they may compete or they may supplement each other. This desirable end, however, can be brought about only by an unbiased, judicial and scientific attitude toward the merits and demerits of either of the specific remedies.

Here it must be acknowledged that one of the original important expectations regarding the actions of salvarsan has not been realized in human syphilis. While in the animal experiments one injection cured the disease permanently, this has not been the rule in the treatment of human syphilis, especially when the treatment is begun after the onset of the secondary manifestations. In a good many instances the syphilitic symptoms reappeared even after repeated injections of salvarsan. While it seems that relapses occur less frequently after intravenous injections and become strikingly less extensive and less frequent with the repetition of the injections, the fact remains true that in many instances the syphilitic human body cannot be sterilized with one injection. This fact would have had to be put down as a very serious drawback in the treatment of syphilis by salvarsan, on account of the possibility of the gradual development of resistant strains of spirochetes. Fortunately it has been recently discovered by Margulies, in Ehrlich's institute, that, in contrast to arsacetin and arsenophenylglycin, salvarsan does not produce strains of spirilla resistant to it. This important observation finds its confirmation in recent clinical experience. The third and fourth injection of salvarsan affects the syphilitic manifestations with the same promptness as the first injection. This fact is very significant; it takes away the motive for the aim to destroy all the parasites with one injection, and it may lead to important changes in the method of administration of salvarsan. On the basis of the foregoing considerations I have recently advocated, instead of the use of one large dose, the injection for some time at regular intervals of small doses of salvarsan in very dilute solutions into the lumbar muscles. By this method it may be possible to prevent local and general by-effects as well as relapses. The method offers the further advantage that it could be used by the general practitioner.

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SAMBON'S NEW THEORY OF PELLAGRA AND ITS APPLICATION TO CONDITIONS IN GEORGIA

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I wish to call attention to a new theory of pellagra, and especially to apply this theory to conditions in Georgia, and to show that the same conditions exist in Georgia to produce the disease that exist in Italy, the chief home of the disease. This theory was formulated by Dr. Louis W. Sambon, lecturer on tropical medicine at the Liverpool School of Tropical Medicine, who was detailed for three months in 1910 in Italy, where he studied pellagra. Dr. Sambon is a research student of recognized ability. In 1903 he formulated the tsetse fly theory of sleeping-sickness, which has proved true. His "Progress Report" on pellagra and the result of his investigations appeared in the London *Journal of Tropical Medicine* during September, October and November, 1910, and I shall draw freely on these accurate and interesting articles.

First, I wish to define pellagra according to our present knowledge. Pellagra is a non-contagious, non-inheritable disease, of insidious course, characterized by a peculiar, periodic eruption, and a series of symptoms involving the nervous and digestive systems, periodic and progressive. This definition is based entirely on the clinical history of the disease, and does not take into account the cause or the environment in which the disease develops. We can now proceed more fully to the consideration of this new theory of cause and origin.

There is one primary condition on which all theories are based, and one easy way by which we test freely and accurately every theory. It is stated in this simple way: Every theory to be correct must be in accord with the

facts. On this simple proposition all theories must stand or fall, and by this same simple rule we may test this new theory of pellagra.

Sambon opens with five propositions:

1. Pellagra is not due to the eating of maize, either sound or deteriorated, as hitherto almost universally believed. In support of this statement are the following facts:

A. Maize was grown in Italy from one and a half to two centuries before pellagra appeared in that country, and it is, therefore, impossible to connect the introduction of the new cereal with the first appearance of the disease.

B. Pellagra occurs in people who do not eat maize or corn products. Casana stated at a meeting of the Catalonian Academy of Medicine that in Spain the greater prevalence of pellagra existed in those provinces where the cultivation and use of corn is unknown. Children contract the disease in Italy as early as the third month, provided they are brought outdoors and exposed to the bites of the *Simulium* fly. An illegitimate child was born in an Italian jail, and at five months was adopted by peasants living along a running stream. It developed pellagra in two weeks after exposure to the bite of this fly, though it had never eaten any corn products of any kind.

C. The absolute failure of preventive measures on the part of the Italian government; *e. g.*, the inspection of maize and its products; abolition of the late varieties of maize; notification of cases; and establishment of pellagrosarios for the treatment of the disease.

2. Pellagra has a striking, peculiar, and well-defined topographical distribution. In northern and central Italy the pellagra foci are found in the narrower valleys of the country districts, where the streams are infested by the *Simulium* fly. Wherever pellagra is found, these flies are found in the districts bordering the streams.

3. These endemic foci, or stations, have remained exactly the same for at least a century. The disease presents the same relative proportions in all the affected districts, and towns are generally exempt.

4. The pellagra stations are closely associated with streams of running water. Pellagra is a rural disease, and the greater number of cases occur in the country districts, and especially among people living along running streams. The greater liability of field laborers is explained by the fact that they are more exposed to the infective agent than others. Nearly all the pellagrins in Italy say that in the spring they are greatly tormented by the bites of the sandflies. These flies are more active in the early morning and late evening.

5. A blood-sucking fly, of the genus *Simulium*, is, in all probability, the agent by which pellagra is conveyed. It is a periodic disease, the seasons of incidence being spring and fall, and the *Simulium* fly has these same periods of activity.

This is a condensed statement of the Sambon report as to conditions in Italy. We now turn to conditions in Georgia. I asked the junior and senior classes in the Atlanta College of Physicians and Surgeons for a statement of the cases of pellagra in their home communities with regard to sex and the relation of the homes of the pellagrins to standing or running water. Georgia is not in the statistical area, and this was as accurate a method as I could find to get an estimate. Thirty-six cases were reported, twenty-six women and ten men. All of the number but one either lived on or very near streams of water; this patient was a banker living in a small town and the relation of his residence to streams could not be determined. Thirty students reported from as many different communities. These separate reports follow:

Number of Report.	Number of Pellagrins.	Residence.
1	3	Swamp, 3 streams.
2	3	Swamp.
3	1	Stream within 50 yards.
4	1	Location wet and swampy.
5	2	Stream within ¼ mile.
6	1	Unknown.
7	1	¼ mile standing water.
8	1	¼ mile branch.
9	1	Between two streams.
10	1	¼ mile pond and stream.
11	1	300 yards of a branch.
12	1	On Chickamauga Creek.
13	1	Within 200 yards of creek.
14	1	Within 300 yards of creek.
15	2	Within ¼ mile of creek.
16	1	On stream.
17	1	On stream.
18	1	Resided on pond 5 years.
19	1	Between two springs and fresh branches.
20	1	Within 1 mile of stream.
21	1	Within 250 yards of stream.
22	1	Within 200 yards of stream.
23	1	12 years within 100 yards of stream.
24	1	15 years within 100 yards of stream.
25	1	Within 1 mile of stream.
26	1	Within ¼ mile of stream.
27	1	Within 30 yards of stream.
28	1	On sea coasts.
29	1	In city.
30	1	Within 100 yards of stream.

The testimony of these thirty men from different sections of Georgia and some of the other southern states agrees in this: The cases of pellagra in the South originate in those living on or near streams of running water. The idea was new to these students; they were from places far distant from each other, and yet their testimony is practically united. While in Franklin, N. C., last summer I investigated the premises and surroundings of a pellagra patient, a woman, who had recently died. The house bordered the road in front, and behind a branch of rapid mountain water ran within fifty feet of the back porch. On the right of the house was a perfect swamp, and the stream marked out a narrow mountain valley; exactly the same topographic conditions found in Italy by Sambon. These valleys and stream areas were so alike in situation and environment that he was able, after viewing the topography of a given locality, to state whether pellagra existed in that locality, and this without being once in error, and even before he was given the pellagra statistics of the given area.

The *Simulium* fly is of the order *Diptera*, or two-winged flies; family *Simuliidæ;* with the one genus *Simulium*, having species. Of these Sambon found three species in Italy—*Simulium reptans*, *S. ornatum*, and *S. pubescens*, chiefly the last. The two chief species in America are *Simulium venustum*, or black fly, the great biter of the Northern woods; and *Simulium pecuarum*, the southern buffalo gnat. This buffalo gnat causes the death of many mules and domestic animals. It is found along the tributaries of the Mississippi river, through the state of Mississippi, possibly all of Arkansas, in Tennessee, Kentucky, and parts of Missouri, Illinois, and Indiana. Since 1850 this buffalo gnat has killed many thousand domestic animals. The gnats appeared in Mississippi as early as 1818, and in 1884 killed in Franklin Parish, La., 300 head of stock in one week. They do not seem to appear every year in damaging numbers, but are always more numerous in time of flood. Sambon notes that in Italy the greatest number of pellagra cases occur in the flood and overflow years.

Two crops of the insect emerge from the streams each year; one appearing from February to April, and the other from September to December. The eggs are laid, when possible, in streams of rapid, shallow water, as in an ordinary branch or creek. Rock, leaves and brush in the water are good places. They hatch in about eight

days to a larva, passing in about four weeks into the pupa stage, and emerging in three weeks, after having spent the pupa stage in the bottom of the stream, as the mature two-winged fly or gnat. Pellagra is most active in spring and autumn, and toxins have no relation to seasons, whereas diseases of parasitic origin are seasonal.

It has been shown that the same topographic conditions exist in Georgia and some of the other southern states that Sambon found in Italy. It has also been shown by the united testimony of several students that practically all the cases of pellagra are rural in origin and exist along streams. I asked Dr. Bradley, assistant state entomologist of Georgia, to determine for me, if possible, whether any species of the *Simuliidæ* existed in Georgia. He consulted Dr. J. M. Reade, professor of botany in the University of Georgia, at Athens, and they found in a creek two miles from Athens the larvæ of the fly in such numbers that they completely covered some of the rocks. Attached at the anal end, they waved their two modified mandibles in the fast-flowing water in search of desmids, diatoms, and other aquatic growths. They were found February 8, and they merged as the spring brood of the mature fly March 27, 1911. This species was identified as *Simulium pictipes*, a remarkably large species, found also and reported from the Adirondack Mountains, Texas, Michigan and California. This species was identified for Dr. Bradley by Dr. O. A. Johannsen of the Maine Experiment Station. The third condition exists in Georgia as in Italy, viz., the presence of an abundance of *Simulium* flies. Lastly, we have a large rural population, as has Italy.

To summarize:

1. Georgia and Italy both have pellagra.
2. The two have the same topographical conditions.
3. Pellagra originates in both territories along streams.
4. Both countries have many *Simulium* flies.
5. Both countries have a large rural population, from which most cases of pellagra originate.

This theory of Sambon has received the support of Sir Patrick Manson in the fourth edition of his book on tropical medicine; and Castellani and Chalmers support it in their recent book on the same subject. Professor Terni at the Pellagra Congress held at Milan, and Drs. Moore, Wood and Taylor, spoke in favor of Sambon's insect theory at the Columbia, S. C., Congress on Pellagra, though Sambon had not in 1908 connected the *Simulium* with the disease. The supreme criticism of the theory lies in the fact that the parasite has not yet been discovered, and this discovery is necessary to complete the theory. Analogies are always dangerous, and when pursued too far lead one into an illogical abyss, but I think that there is an analogy between pellagra and malaria. Both develop in swamp and stream localities, both have periods of seasonal incidence, and removal from the endemic areas common to each disease results in improvement, and prevents reinfection. Laveran discovered the parasite of malaria in 1880, but it was not until 1898 that Ross discovered the mosquito as the definite host. The discovery would have been just as real had Laveran discovered the insect first, and Ross the parasite last. Indeed, this is the order in which Sambon discovered the tsetse fly and the sleeping-sickness parasite as the cause of sleeping-sickness—insect first and parasite last. The parasite of pellagra is a discovery to which we may look forward in the near future. Certain it is that the corn theory is not in accord with the facts, and must die the death of unfounded theories.

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A DIRECTORY FOR WET-NURSES: ITS EXPERIENCES FOR TWELVE MONTHS

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Most general practitioners and all men who deal especially with infants have had at one time or another occasion to find a wet-nurse for some sick baby. Often it has been a question of obtaining human milk within twenty-four hours to save the life of the baby. Anyone who has searched for a wet-nurse and has hunted hours and sometimes days without success, knows what a discouraging chase it has been; it has been doubly so when the emaciated baby was quickly slipping beyond all hope of recovery.

An attempt was made, about ten years ago, to register wet-nurses at the Boston Medical Library under the same system as an intelligence office and thus to centralize the demand and supply. This was a failure for several reasons: A mother who was forced to wet-nurse usually did so because she had not enough money to live on and, therefore, could not wait for a position. If she was married her husband had either deserted her, was dead, or incapacitated by disease, and she, therefore, was forced to become the wage earner of the family; if she was unmarried, she was either deserted by the father of her child or was unable to obtain help from him for various reasons. If she was lucky enough to obtain other sorts of work she weaned the baby immediately and boarded it with some woman. The attempt at the Boston Medical Library was, therefore, a failure. In 1906 Dr. F. P. Denny of Brookline, in closing the discussion of a paper that he read before the American Medical Association, said, "If some charitable institution, preferably a hospital under medical supervision, would keep at least a registry for wet-nurses, whose antecedents are well known, it would be of great benefit. Such an institution, using every precaution, in desperate cases, might furnish breast-milk on short notice." The matter dropped there and nothing more was done. This paper is a description of a directory and home for wet-nurses which has been run for one year, and which has been the means of saving many babies' lives. So far as I can find out, this is the first successful attempt to establish a directory for wet-nurses.

Two things are necessary for success: first, the directory must be run in connection with some babies' hospital where the problems of breast-feeding are understood; and second, the women must have a home where they can wait for work without expense to themselves. The money necessary for this venture was given by a philanthropist who made no restriction as to the scope of the work, but who wisely insisted that it should be widely advertised.

On Feb. 1, 1910, the directory was opened, under the supervision of the hospital of the Massachusetts Infant Asylum. A moderate-sized house was obtained with a parlor, kitchen and three bedrooms fitted for six women and their babies, and accommodations for a matron. The women at first took their meals at the hospital; later it was found wise to send the meals from the hospital to the house in a specially constructed box which was donated by one of the directors. The food is good and wholesome, such as is given to the wet-nurses in the hospital.[1]

1. Talbot, F. B.: Two Methods of Obtaining Human Milk for Hospital Use, Boston Med. and Surg. Jour., March 2, 1911, p. 304.

The next problem was to find the wet-nurses so that when the demand came there would be a supply. This was done in two ways. The first, and most important, was through the various maternity hospitals. It was quickly found that the directory was facilitating their work because one of their problems was to make provisions for the friendless mothers who had to go penniless out into the world, and it was found that in most instances the directory could help them in a very practical way. The second way was intended to create a demand as well as a supply. This was done by sending the following postal card to every physician in Massachusetts and all the large towns and cities of the New England States.

HOSPITAL OF THE MASSACHUSETTS INFANT ASYLUM
106 Chestnut Avenue
DIRECTORY FOR WET-NURSES

JAMAICA PLAIN, October 20.

A directory for wet-nurses has been established at the hospital of the Massachusetts Infant Asylum, Jamaica Plain, telephone Jamaica 132. Wet-nurses may be obtained here at any time by paying a fee of ten dollars. The institution is not expected to make money and this fee is a nominal one to help pay expenses. The wet-nurses and their babies are examined physically by a physician; no one will be recommended with any signs of tuberculosis or syphilis. The babies are weighed at frequent intervals to determine how much breast milk the mothers are giving the babies and how well the milk agrees, as shown by their weekly gain in weight. An attempt is made to teach the mothers how to be cleanly, self-respecting and how to care for their babies. The directory requests you to send to it any woman who desires to obtain a position as a wet-nurse; she will be given board and lodgings free if she is a worthy person. In this way she will have an opportunity to remain with her baby and to get work. Further information can be obtained by telephoning the Hospital of the Massachusetts Infant Asylum, or Dr. Fritz B. Talbot, 311 Beacon Street, telephone Back Bay 173.

Many of the calls for wet-nurses were due to these postal cards and in a few instances they were instrumental in sending prospective wet-nurses to the directory.

When a woman applies for admission to the directory she and her baby are examined by the physician on duty who fills out the following card which is kept for reference.

Name of wet-nurse.....
Taken on probation.....Accepted.....
Comes from .....
Birthplace.....Age.....S. M. W.....No. of children.....
Confined. Date.....Place.....
Family history .....
Past history .....

EXAMINATION: Breasts.....
Nipples.....Mouth and throat.....
Lungs.....Glands.....
Skin.....Bones.....
Wassermann reaction.....REMARKS.....
Baby—Physical condition .....
This woman is.....suitable for trial.
.....M.D., Examiner.

The reverse side of the above card is intended for a record of the names of the infants nursed and the dates of first and last nursing.

A careful physical examination is made for signs of tuberculosis and syphilis. The Wassermann test is done on the blood of each woman at the Harvard Medical School. If the physical examination and the Wassermann reaction show that the woman is normal, she is admitted to the directory. Occasionally a wet-nurse can wait in her own home for a position, but she is required to come to the hospital with her baby for the physical examination and her address and telephone number are taken. Any woman who is unable or unwilling to come for examination is not recommended to a position, but her address is given to anyone who cares to look her up. These wet-nurses' names are put on a list and sent out in turn as they register.

Frequently the wet-nurse comes underfed or only recently up from her confinement; she must, therefore, be built up before she is allowed to go out to work. While she is waiting she is taught the proper care of herself and baby, and is required to do only light housework. The babies are watched and weighed carefully twice a week and it does not take long to find out whether the breast-milk which they are receiving is good or not. Once a week the babies are weighed before and after nursing for six consecutive nursings in order that an idea may be obtained of how much milk is being secreted. The supervision of two excellent trained nurses[2] as well as two more semi-trained associates makes it possible to obtain a very good idea of the physical condition and the moral character of the woman.

The directory charges a fee of ten dollars for supplying one of these women. This fee is used to pay, as far as possible, the expenses of the institution, the balance being supplied by charity. If the demand and supply continue to increase the directory should be self-supporting at the end of another year. When the public does not appreciate what this nominal fee means, and considers it exorbitant, the directory explains that the fee represents the trouble and time of finding the women, the physical examination, the knowledge about the women which could be obtained in no other way, and their board for the time which they have had to wait. There are more people who consider the fee too little than too much. The directory feels sure that the many physicians who have used the directory appreciate it as much as the family does. The women are supposed to receive wages of eight dollars a week which they save for the future when they have to look out for themselves. Some have saved over one hundred dollars. If for any reason they do not seem to be worth this amount or the family is unable to pay that much, they are allowed to go for a smaller sum.

The baby must go with the mother in every instance. No exceptions can be made to this rule for the following reasons: Usually a baby which requires a wet-nurse is so sick that it cannot drain her breasts as does the normal infant; if the breasts are not emptied by the healthy baby after the sick one is satisfied, the milk soon dries up. Second, if the nurse's baby is placed at board, the money earned would quickly be used up; and third, it is hoped that if the mothers and babies are kept together long enough, the former will become so attached to them that they will always care for them. It has been found that most of the mothers do become fond of their babies. All have said, "I don't know what I should have done if this opportunity had not been given me." Lastly, the directory is profiting from the experience of the wet-nurses in New York, whose babies are placed out to board as soon as the mother obtains a position, with a reported mortality of 95 per cent. The mortality among wet-nurses' babies while under our care has been zero.

After the wet-nurse has been in a position a week or more the following cards are sent to the head of the family and to the family physician to be filled out:

DIRECTORY FOR WET-NURSES
UNDER AUSPICES OF
HOSPITAL OF THE MASSACHUSETTS INFANT ASYLUM
106 Chestnut Avenue, Jamaica Plain, Mass.

.....191..

M .....
Will you kindly answer the following questions regarding.....
..... and add any further information which may be of service regarding her.

Respectfully,
.....Supt.

1. Is the wet-nurse neat?
2. Willing and cheerful?
3. Does she take correction well?
4. Orderly and thorough in her work?
5. Gentle and patient with her own baby?
6. Did she seem fond of her own baby?

2. Miss Alice Cheney and Miss Greta Mabry.

7. Conscientious?
8. What are the wet-nurse's faults, if any?
9. How much did your baby gain on her milk?
10. Did your baby improve?

Remarks:

DIRECTORY FOR WET-NURSES
UNDER AUSPICES OF
HOSPITAL OF THE MASSACHUSETTS INFANT ASYLUM
106 Chestnut Avenue, Jamaica Plain, Mass.

Dear Dr.....
Will you kindly answer the following questions regarding.....
....., who went as a wet-nurse to your patient, ...

1. Was the wet-nurse satisfactory?
2. Did she do well with the sick baby?
3. How well did her own baby do?
4. Would you be willing to recommend her again?

Remarks:

.....M.D.

I expected that there would be a great demand for wet-nurses during the summer and fall months and was greatly surprised and gratified to find that this continued throughout the year during which thirty-five wet-nurses lived at the directory for varying lengths of time. Three to five women have been sent into families each month. In many instances one woman obtained several positions, from all of which came favorable reports about the sick baby. The majority of the reports which have come back say that the sick baby has gained three pounds in six weeks.

The early experiences of the directory were not hopeful. One of the first women who came deserted her baby one evening and was not seen afterward, despite the fact that the police were immediately notified. Some of the other women had no milk at all or were not physically fit to nurse, and were, therefore, returned to the charity from whence they came. With experience came better judgment in picking the women, and of late the directory has had very satisfactory applicants.

The wet-nurses themselves seem to be happy, and without exception have improved a great deal physically. Their babies have all gained weight in a normal manner. They have been in better general condition than the wet-nurses' babies who live continually at the hospital, even when they were weaned entirely from the breast. When the milk has given out, the women have returned to the directory and have been referred to the charity from which they came. One or two have been fortunate in securing the sympathies of the family with whom they worked and have obtained permanent homes; two others who were unmarried before coming to the directory have been married while under its care and are now living in homes of their own.

The physicians who have used the directory are scattered from Maine to Connecticut. Occasionally they required only a few ounces of human milk for the sick baby to get the necessary therapeutic effect. In that case the directory was able to supply small amounts of drawn breast-milk (from 4 to 12 ounces) which was delivered in sterile bottles packed in ice.

The obstacles to establishing a directory for wet-nurses seemed very big at first sight, but became less and less formidable as experience increased. The troubles of the past year have been insignificant when compared to the good the institution has done. I believe that similar directories could be established in all large cities for the good of the sick babies and the practitioners on the one hand, and of the wet-nurses and their children on the other.

NOTE.—The Northwestern University Medical School diet kitchen, at Chicago, under Dr. F. X. Walls, has been using human milk for a number of years. It always has a wet-nurse on its pay-rolls and at times more than one. The wet-nurses milk their breasts by hand and average 20 to 30 ounces to each nurse daily. This method of obtaining human milk is similar to that used at the hospital of the Massachusetts Infant Asylum, which was described by me in the Boston Med. and Surg. Jour., March 2, 1911, p. 304.

311 Beacon Street.

CONTAMINATION OF THE FLY WITH POLIOMYELITIS VIRUS

TENTH NOTE *

SIMON FLEXNER, M.D., AND PAUL F. CLARK, PH.D.

NEW YORK

There are still so many unsolved problems relating to the manner of the spread of epidemic poliomyelitis that every new fact would, at present, seem worth recording. The present point of view, based on seemingly accurate clinical observation, is to the effect that many cases of the disease can be connected with each other through evidence of direct and indirect contact of the ill and the well. Not all cases, however, have been so connected, and it remains, therefore, to ascertain whether any other agency than human contact may be invoked to account for the distribution of the infectious agent. Perhaps the most baffling cases are those which arise at widely distant points in a sparsely populated community. That certain of these cases are actually connected with each other through the intermediation of persons commingling with both the ill and the well seems highly probable; but strict search has failed often to establish the fact of such intermediation. Hence the possibility that insects take part in the dissemination of the infection has been suggested by many writers; but up to this time we have had no actual data on which to support this notion.

Insects that possess the power to migrate over a considerable territory, that affect all classes of society, that abound during the period of greatest prevalence of the disease, and that do not wholly disappear at any season, should be the first to come under suspicion. Many, if not all, of these conditions are fulfilled by the common house-fly, which, therefore, has been subjected to a series of contamination experiments.

The flies employed by us have been laboratory bred. Full-grown flies have been permitted to feed on the fresh spinal cord removed from monkeys inoculated with the virus of poliomyelitis and recently paralyzed. After feeding, the flies have been removed to a fresh receptacle from which certain numbers were removed at intervals, killed with ether, then comminuted with sand and extracted with saline solution, from which a bacteria-free filtrate was obtained by means of a Berkefeld filter. The filtrate was injected in the usual manner into the brain of rhesus monkeys. Brief protocols of two experiments follow:

Experiment 1.—A *Macacus rhesus* monkey was inoculated intracerebrally on May 2 with 3 c.c. of a filtrate prepared from the bodies of seven flies which had lived in clean surroundings for twenty-four hours after having fed on portions of the spinal cord obtained from a recently paralyzed (poliomyelitis) monkey. After recovery from the ether anesthesia, the monkey remained well until May 8, when it appeared somewhat weak. On May 9, it presented the common prodromal symptoms of excessive nervousness and excitability and the left arm showed paralysis. During the day the paralysis extended and affected the right arm. May 10, the legs were also paralyzed; the animal was etherized. The autopsy showed the characteristic lesions of experimental poliomyelitis in the spinal cord.

Experiment 2.—Another *Macacus rhesus* monkey was inoculated intracerebrally on May 3 with a filtrate prepared from the bodies of ten flies, which had fed forty-eight hours before on the spinal cord obtained from a paralyzed monkey. After recovering from the ether anesthesia, this animal remained well until May 13. By May 14, paralysis of all four extremities had developed and the animal was etherized. The autopsy

* From the Laboratories of the Rockefeller Institute for Medical Research.

showed characteristic lesions of experimental poliomyelitis in the spinal cord.

The experiments recorded merely show that flies contaminated with the virus of poliomyelitis harbor the virus in a living and infectious state for at least forty-eight hours. They do not show that this is the limit of the period of survival, and they throw no light on the question whether the virus is retained merely as a superficial contamination or whether it can survive in the gastro-intestinal tract Experiments relating to these points are in progress.

HEXAMETHYLENAMIN: A REMEDY FOR COMMON COLDS

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PORTERVILLE, CAL.

Acute infections of the upper respiratory tract, whether manifested as coryza, acute rhinitis, pharyngitis, or tracheobronchitis, are of the commonest incidence. A "cold," the grip, influenza nostras, catarrhal fever, acute bronchitis, are common terms used to designate such attacks. The infectious nature of the disease is almost universally accepted, although the identity of the infecting agent is not established. Walter's investigations[1] are of practical interest. He shows that the *Bacillus segmentosus* of Cautley and the *Micrococcus catarrhalis* are probably sometimes causative of acute rhinitis and infections of the middle ear and accessory nasal sinuses.

A cold may cause as much suffering and incapacity as many diseases considered more serious. Often the illness is prolonged from the usual few days to ten days or two weeks. These infections are only too frequently the starting-point of complications that are a life-long menace to well-being. Among such complications and sequelæ are a predisposition to repeated attacks, a tendency to "catch cold" easily, suppurations of the accessory nasal sinuses, otitis media, hypertrophied and chronically inflamed tonsils, adenoids, etc.

The diversity of treatment of colds is common knowledge; doctor and layman alike prescribe hot drinks, foot-baths, sweats, quinin, coal-tar antipyretics, Dover's powders, whisky, and so on. And some as wisely prescribe time, since the disease is self-limited and a recovery is the rule after a period of greater or less discomfort.

In view of the reported excretion[2] of hexamethylenamin in the saliva, and by the middle ear and bronchial mucous membrane, I have been for the past year prescribing it for common colds.

In most cases it acts promptly and efficiently. The irritating, watery secretion of coryza stops; the fever, aching and malaise of influenza cease; the threatening disease is averted.

Hexamethylenamin should be administered at the earliest possible moment; that is, when the nose begins to feel stuffy or the discomfort begins—"when the cold is being caught." Its use, after the infection has existed for several days, is less gratifying, possibly on account of the mixed infection at that time with pus organisms.

As to the dosage, it seems necessary that a larger amount must be given to obtain antiseptic results in the gall-bladder, subarachnoid space or on the nasal mucous membrane than is required as an antiseptic in the urinary tract. The findings of Crowe[2] seemed to indicate that 75 gr. a day must be given in order to obtain quickly the desired effect in the gall-bladder. At the onset of a cold the following prescription, which makes the dose 15 gr. four times in twenty-four hours, is efficient:

℞

Hexamethylenamin ..... gm. 12| or 3iii

Div. in chart. cerat. No. xii.

Sig. One powder to be taken in a goblet of cold water four times daily.

Copious water-drinking is encouraged, which lessens the possibility of bladder irritation. This latter is the only ill effect of the drug, but it occurs only occasionally and ceases at once when the medicine is discontinued. As a cure for colds it may be as great a boon as it has been proved to be as a urinary antiseptic.

1. THE JOURNAL A. M. A., Sept. 24, 1910, p. 1091.
2. Crowe: Bull. Johns Hopkins Hosp., 1908, xix, 109; Barton: THE JOURNAL A. M. A., March 12, 1910, p. 871; Heitmuller: ibid., April 9, 1910, p. 1222; Hanzlick: ibid, June 11, 1910, p. 1940; Brown: ibid., April 16, 1910, p. 1308.

TUBERCULOUS JOINT-DISEASE

REPORT OF A CASE ILLUSTRATING THE CRITICAL WATCHFULNESS DEMANDED DURING CONVALESCENCE

JOHN JOSEPH NUTT, M.D.
NEW YORK

The patient, a young woman, had suffered since four years of age from hip-joint disease. She had been under the care of four different surgeons, all excellent men of high standing. While a patient of the third surgeon, she became very impatient to have the apparatus removed. She was wearing at this time some sort of a convalescent splint the exact nature of which I do not know.

About five years ago the patient put herself under the care of the fourth surgeon and was immediately told that she should have discarded all braces ten years before. Since that time she has not only been without any protection to the joint but has had *massage* and *passive movements* prescribed. She complained of weakness from the first and during the last four years it has been increasing. The surgeon does not seem to have appreciated the true significance of this subjective symptom nor of the more indicative signs which are now well marked but must have been discoverable any time during the last three or four years. Weakness on first removal of a support would be expected but with careful directions, looking to the prevention of over-use, etc., this should tend to lessen rather than increase if convalescence is to result in a cure.

At present she is able to walk but a short distance and uses the leg more as a prop or stay than as a support. Examination shows: An area of acute sensitiveness behind and above the great trochanter; marked muscular spasm as the limitations of motion are reached, and acute apprehension of the joint to weight-bearing or to the interarticular pressure caused by attempting to raise the leg from the table when in the reclining position.

A radiograph showed absence of head and neck of the femur, an almost completely filled acetabulum, and a partially formed socket above the old one, in which the remainder of the neck is articulating. There is a spot, half an inch in diameter, back of the trochanter, which appears to be the site of an active inflammatory process.

Protection from all weight-bearing, by the use of crutches, has been ordered, without any apparatus for either immobilization or traction, and, the patient's general condition being excellent, it is expected that frequent examinations will determine a disappearance of the signs and that six months or possibly one year will find the crutches unnecessary. Should the signs persist or increase, more protective measures will have to be adopted. Passive movements and massage are emphatically forbidden.

This case seems to illustrate the necessity of frequent examinations during convalescence from hip-joint disease. In no other way can the signs of Nature be properly interpreted. Her approval or her disapproval of the demands made on the joint must be recognized and means must be taken to follow the path she points out before serious damage is done the recovering articulation.

ANOTHER CASE OF SPOROTRICHOSIS IN MAN

ALBERT BEAM, M.D.

WILSEY, KAN.

In view of the considerable number of sporotrichal infections in man reported recently by Sutton and others from the middle West, the disappointments experienced by practitioners who fail to recognize the character of the infection, and the pain, danger and expense to which these patients are often subjected, the following more or less typical case may be of interest.

History.—The patient, C. H. B., aged 17, was the son of a farmer, a native and resident of Kansas. The family history was exceptionally good; past history negative. The present trouble consisted of an indolent ulcer on the left knee and four nodules on the inner side of the left thigh with the history that about one month before a small red papule appeared on the knee, which was opened with a needle. This papule spread out slowly and the nodules appeared one at a time. At this time the patient came under my care. There were no subjective symptoms excepting occasional prickling sensations about the ulcer.

Examination.—No systemic disturbance, enlarged glands, impaired functions or any other lesions were found. The ulcer was 3.5 cm. long, 1.5 cm. wide, 3 or 4 mm. deep, covered with a tough brown crust and filled with a dark brown, thick, tenacious pus. The edges of the ulcer were thickened, undermined and bluish-red in color. The line of junction of diseased and normal skin was clearly marked. The area, from edge of ulcer to normal skin, was about 7 mm. The nodules were cutaneous bodies evenly distributed over the lower two-thirds of the thigh, varying in size from a large pea to a hazelnut, definitely outlined and hard except that the lowest one fluctuated in the center. The lowest two were covered with bluish-red skin, the other two with normal skin. None of the lesions was painful or tender and no connecting lines or marks were found.

Treatment.—The pus was evacuated and the wounds dressed with solution of iodin. The patient was given increasing doses of potassium iodid.

Recovery was prompt and uneventful.

Therapeutics

ACUTE ENTERITIS IN CHILDREN: SUMMER DIARRHEA

While pediatricians ridicule the use of the term "summer diarrhea" as unscientific and inexact, still, when one hears or reads the term, a well-defined clinical picture appears before the mind. We all recognize that children from birth up to the age of 1½ or 2 years are especially liable, during the hot weather of our temperate zone, to be affected with frequent loose movements of the bowels, which not infrequently produce serious and sometimes fatal results.

The pathology of this condition is less definitely understood by us than the clinical symptoms and appearances. Even to apply to it the term "acute enteritis" is not free from criticism of inaccuracy and inexactitude. In a large proportion of cases, the trouble would seem to be, to a great extent, in the small intestine, and in another large proportion of cases the large intestine is equally and sometimes more extensively affected than the small intestine. Often, too, frequent vomiting would indicate that the function of the stomach is not performed in an entirely normal manner. In the cases in which the large intestine is extensively affected, and in which the presence of blood in the stools and tenesmus are common symptoms, it is fair to make a separate class and distinguish these cases as cases of colitis or ileocolitis.

In those which we distinguish as enteritis and in which it is customary to believe that the small intestine is chiefly affected, the most conspicuous symptom is diarrhea, accompanied sometimes by pain in the middle of the abdomen, but without tenesmus. This class of cases includes a considerable proportion of those forms of disease which have been distinguished as cholera infantum mainly from the rapid onset of the symptoms and the great depression which attends its onset. Possibly in the future a certain proportion of these cases may be distinguished from cases of ordinary acute diarrhea in children on account of the determination of some different bacterial origin.

Limiting, then, our attention at the present time to the cases of ordinary diarrhea seen in infants and young children during hot weather, it has been proposed (see article by Charles Hunter Dunn, THE JOURNAL, Aug. 21, 1909, page 599) to separate these cases into four classes: (1) those in which nervous influence has an important part in producing the symptoms; (2) those in which indigestion is the chief factor; (3) those in which bacterial fermentation seems to be of especial importance; (4) those in which bacterial infection is observed. The latter two it has been proposed by some writers to consolidate into one class and distinguish them as caused by bacterial action, but in the former class the bacterial action is exerted on the intestinal contents by the so-called saprophytic bacteria, while in the latter class the bacteria act on the tissues of the body. This third class has been designated, in accordance with the classification adopted by the pediatric department of Harvard University, as intestinal indigestion with fermentation, or fermental diarrhea. To this class belongs the larger proportion of cases of ordinary summer diarrhea of infants.

The descriptive term, "summer diarrhea" suggests several factors which have an important etiologic relation to this condition. First, during the hot weather of summer, young children become debilitated simply through the influence of the extreme heat. Second, during the hot weather the food-supply of infants is subject to special contamination and deterioration, consisting, as it does, mainly of milk, which usually undergoes transportation and more or less handling, so that a considerable number of hours elapses from the time it leaves the cow until it is consumed by the infant.

The treatment of this acute enteritis occurring in children during hot weather is not chiefly medicinal, but the most important part of the treatment is the hygienic and preventive treatment. In order to prevent these attacks of diarrhea, the child should be kept, so far as possible, from exposure to excessive heat, and should also enjoy a constant supply of fresh air. These conditions are secured least advantageously in the city, and especially in the crowded tenements where most of the poor people live, and where most of the children are compelled to pass the early part of their lives. In order to avoid the excessive heat and to obtain the necessary fresh air, it is exceedingly desirable that the children should be taken into the country or to the seashore during the months of July and August. Failing this, they should be kept out of doors as much as possible, on shaded roofs, in parks or, if possible, on ferry boats or boats provided especially for the health and amusement of the children of the poor. Daily bathing in tepid or cool water helps greatly to promote the comfort of the children who are obliged to remain in crowded houses.

Next to the air, the food demands consideration. As has been so repeatedly stated, the best food for the child, certainly during the first six months of its life, probably during the first nine months, and possibly during the first year, is the milk obtained from the mother's breast. Children who are fed in this way are far less liable to suffer from intestinal disorders during the hot weather than children who are fed on artificial food. In children who are not nursing at the mother's breast it is of the highest importance to give milk which is fresh, uncontaminated, and which has not undergone changes incident to fermentation and decomposition. Much has been said recently about the necessity of quickly reducing the milk to a temperature of about 40 F., and of keeping it at that temperature until it is used. This unquestionably prevents, to a great extent, deleterious changes in the milk, but these changes are far less likely to occur when the milk is used promptly after being obtained from the cow. Of course, in the largest cities where all the milk must be brought from a distance in the country, it is impracticable to obtain milk until it is at least twelve, often twenty-four, and possibly in some cases thirty-six hours old. Under these circumstances, special care must be taken to preserve the milk from contamination and from undergoing the changes which make it a poor food for infants. On the other hand, in the country and in the smaller cities there is really no reason why the milk should not be obtained fresh, so that it will not be more than twelve hours old when it is delivered to the consumer, and in many instances it is possible to obtain it directly from the cow twice a day. Under these circumstances, the problem of infant feeding is greatly simplified.

In children who have been weaned shortly after birth, cows' milk is probably the best substitute for mother's milk, which it is practicable to obtain, but in young infants it is not proper to feed cows' milk, however fresh, without modifying it so that it may conform more nearly to the composition of mother's milk which corresponds to the present age of the child. This matter of milk modification was referred to in this department Aug. 6, 1910, page 504. When these important prophylactic measures have not been carried out with sufficient precision and the infant has become the victim of an attack of acute enteritis, the problem becomes a somewhat different one.

When called to attend an infant who has recently been attacked by diarrhea, the first question which arises in the mind of the physician is as to the propriety of administering some laxative in order thoroughly to clear out from the intestine the offending material which is believed to be present there and to be causing a continuation of the diarrhea. Almost all writers and teachers to-day agree that the treatment should be initiated by the administration of a laxative. They do not, however, agree on which of the different laxatives should be selected. Castor oil, calomel, the salines, and rhubarb all have their advocates. Perhaps most writers advocate the use of castor oil, if it seems probable that the stomach is in a condition to tolerate it. It has been advised to administer castor oil at a considerable interval, as two hours, after any nourishment has been taken into the stomach, and to refrain from giving any further nourishment for two hours more. In case the first dose is vomited, a second dose may be given an hour later. If the patient is not vomiting at the time and no food is given for a considerable period before and after the administration of the oil, it will not, as a rule, cause vomiting, and will act speedily and effectively, and from its after constipating effects will prove doubly useful, both clearing out the offending matter from the intestine, and then checking a further tendency to diarrhea. If calomel is selected as the cathartic, it may be given in doses of from 1/20 to ¼ grain, repeated at intervals of half an hour until six or eight doses have been taken. Or a single large dose may be given with milk of magnesia. This acts less promptly than the castor oil, but is a favorite remedy with many practitioners. Others prefer one of the salines, especially sodium sulphate, which may be given in dose of 10 grains to a child six months old, or 20 grains to a child a year old, as recommended by La Fetra. This depletes the intestinal circulation and at the same time clears out any fermenting food, bacteria or toxins which may be in the intestine. Another useful laxative is rhubarb, which may be combined with soda. This requires several hours for its action but, resembling castor oil, it has the advantage of having an after constipating effect, and so counteracts the continuance of the diarrhea.

It should not be overlooked that there are still a few practitioners who, when called to a case of this kind, and finding that the patient has already had half a dozen or a dozen copious, loose movements from the bowels, are of the opinion that further stimulation of intestinal action is unnecessary, and commence the treatment with an opiate, administering it with the idea of checking the excessive action of the muscular coat of the intestine, and feeling that there is less danger from the absorption of products of fermentation in the intestine than from the weakening of the patient by the excessive intestinal action.

After the intestine has been thoroughly emptied by the administration of a laxative, it is customary to deny the patient any food at all for from twenty-four to forty-eight hours. Thirst will be a prominent and distressing symptom, and to meet this it is customary to give small quantities of water at frequent intervals. Some physicians, instead of giving simple water, give barley water, feeling that they are giving some nourishment in addition to the water, but the amount of nutriment so administered is very, very small. After from twenty-four to forty-eight hours the feeding of the child must be resumed. The most generally useful food is milk, which should be modified, of course, to the age of the child and the power of digestion, if that can be learned. If the capacity of digesting proteins is impaired, the proportion of proteins should be reduced. If, however, the capacity of digesting starchy foods is impaired, these should be reduced. Some believe that the digestive power of the individual can be learned by observation of the feces; that when the feces have a fetid odor, the power of digesting proteins is impaired; when they have a sour odor, the power of digesting starch is impaired; and when they have a rancid odor, the power of digesting fat is impaired. It will usually be found desirable not only to modify the milk in proportion to the age of the child, but to give this modified milk diluted so as to render it easier of digestion. In many cases it will be of advantage to give the milk partially predigested by the use of pancreatin with the bicarbonate of sodium. For instance, the following may be used:

℞	Gm.		
Pancreatini	2		3ss
Sodii bicarbonatis	8	or	3ii

M. et fac chartulas 24.
Sig.: Use as directed.

Dissolve one powder in two tablespoonfuls of water and add eight tablespoonfuls of milk. This may be gradually warmed and given to the child as soon as it gains the required temperature, or, having been raised to a temperature of about 100 F., the warming process may be continued for four or five minutes. If the warming process is continued for very many minutes the milk will develop a bitter taste and become less palatable to the patient, although, of course, not less digestible.

Here, again, the therapeutic management of the child may be varied according to the population of the city where he resides. Owing to the difficulty of obtaining fresh milk in the largest cities it will often be found advisable to resort to condensed milk. Thirty or forty years ago condensed milk enjoyed great popularity as a food for infants because it received the recommendation of specialists in the diseases of children who lived in the largest cities and who realized the difficulty of securing an adequate supply of fresh, uncontaminated milk for their poorer patients. Condensed milk became almost a craze, and the craze passed on from the larger cities to the smaller cities, and even to the country districts, but a few years sufficed to prove that children who were brought up on condensed milk were not so well developed as children who were fed on fresh cows' milk, and the pendulum swung the other way and condensed milk fell into disuse. However, in many instances, in the large cities, for brief periods of time, as for instance during the hot summer months of July and August, it will be found a most useful adjuvant in the feeding of children. If deemed advisable, one of the many artificial foods may be tried for a short time.

Beef juice, beef tea, and other meat preparations may sometimes prove useful temporarily, but their importance is so little compared with that of milk that their discussion need not detain us longer.

No child should ever be treated for any acute disorder without the physician ascertaining its temperature. When, in these cases, the child is found to have some fever, active efforts should be made to combat it. The most useful method of accomplishing this is by means of tepid or cool baths in connection with fresh air and avoidance of exposure to the sun. A sick child, and especially a child ill with diarrhea, should never be moved about by the handling and tossing up and down of which ignorant people are so fond. Nor should he be wheeled long distances in a baby carriage, which also imparts a continuous series of jolts to the little invalid. He should be laid on a bed or on a pillow and kept as quiet as possible. He should, especially if he has pain, have warm applications made to the abdomen. These may be a small rubber bag partly filled with warm water, a hot poultice, a spice paste, or simply hot flannel dry or moistened with alcohol and water.

Having discussed thus in detail the most important part of the treatment of the child, there remains now to speak of the less important part, the medicinal treatment. The most popular drug in this class of cases is bismuth. The notion that many physicians have that subnitrate or subcarbonate of bismuth coats over the mucous membrane of the intestine and so relieves irritation and inflammation is probably generally a delusion. Whether it acts as an antiseptic in antagonizing decomposition and fermentation of the intestinal contents, has not been determined. On the ground that small doses cannot have very much effect in protecting the mucous membrane of the intestines, it has been proposed to give large doses, of from 15 to 30 grains, but while some may hesitate to give doses of this size, there is considerable clinical evidence in favor of the usefulness of smaller doses, of from 5 to 10 grains.

Another drug of perhaps equal repute with bismuth is phenyl salicylate (salol). This often allays vomiting, if it is present, often relieves pain, and unquestionably diminishes fermentation and decomposition. It may be given in a dose of ½ grain for a child of one year, or 1 grain for a child of two years, repeated every two hours. It should not be given, however, for more than ten doses at this rate, as it readily causes phenol poisoning. If given longer the frequency of the dose should be reduced to once in six hours.

Again the question as to the advisability of giving opium arises. If, after the intestinal canal has been thoroughly cleared out the frequent loose movements continue, it will generally be found that small doses of opium will prove useful. The best preparation for children is probably the tincture of deodorized opium. The proper dose of this for a child of from 1 to 2 years is 1 drop, and for a child of 6 months it is ½ drop. With this drug may be combined various aromatics. Many physicians still use some combination of bismuth and opium, as:

℞	Gm. or c.c.		
Bismuthi subnitratis	6		ʒii
Mucilaginis acaciæ (fresh)	25	or	fl.ʒi
Tincturæ opii deodorati	1		♏xviii
Aquæ cinnamomi .....ad	100	ad	fl.ʒiv

M. et Sig.: A teaspoonful, in water, every two hours. Shake.

It has been shown in the laboratory that the bismuth subnitrate can, although it is exceedingly rare that it does, cause a little irritation and nitrite poisoning. The bismuth subcarbonate can never do any harm; therefore, it seems advisable to always give the subcarbonate of bismuth rather than the subnitrate. Also, it seems not good prescription-writing to put bismuth, an insoluble preparation, into a solution which must be shaken, and in which the amount of bismuth in one dose may not represent the amount in another dose. It is much better, therefore, to order bismuth in powder and have this put into milk, or whatever nutriment the child is receiving. It can be put into a teaspoon of milk, and the child will readily sip it down. It may be ordered alone or in combination with phenyl salicylate as above suggested. A prescription for a child one year old would be as follows:

℞	Gm.		
Bismuthi subcarbonatis	6	or	ʒiss

Fac chartulas 20.
Sig.: A powder every two hours.

Or:

℞	Gm.		
Bismuthi subcarbonatis	3		gr.xlv
Phenylis salicylatis	.50	or	gr.viii

M. et fac chartulas 10.
Sig.: A powder every two hours.

It is much better to order the deodorized tincture of opium alone and administer a drop or more, as deemed necessary, every three or four hours, depending on whether the child is drowsy or not. If less than one drop is required, it is easy for the nurse to put a drop into two teaspoonfuls of water and give the child one of them, which would represent ½ a drop of the preparation.

If the heart becomes weak, whiskey or brandy may be given. For a child 1 year old, from 10 to 20 drops, in plenty of water, and given at intervals of two hours, is a large enough dose.

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[*For other information see second page following reading matter*]

SATURDAY, JUNE 10, 1911

GROWING ANIMAL TISSUES OUTSIDE OF THE BODY

Wöhler in 1828, by synthesizing urea, performed what up to that time was considered to be impossible, namely, the artificial production of an organic substance from mineral matter. Since then up to the present time there have been few advances in biology which seem so startling as do those which have been made in recent years, resulting in the establishment of a technic whereby animal tissues may be made not only to live, but also actually to grow outside of the body.

Harrison,[1] working at Johns Hopkins, in 1907, was the first actually to cultivate tissues outside the body. He found that the embryonic tissue of frogs, when transplanted into coagulable lymph, would develop normally. Burrows[2] in 1910, working under Harrison at Yale, was the first to grow normal tissues of warm-blooded animals; he used chick embryos in his experiments. Finally Carrel and Burrows[3] at the Rockefeller Institute, in September, 1910, succeeded for the first time in cultivating mammalian tissues. Recently they[4] have published a complete account of their technic and results. It was found that almost all the adult and embryonic tissues of the dog, cat, chicken, rat and guinea-pig could be easily cultivated *in vitro*. The life of these tissues varies from five days to about twenty days; but it may be prolonged by secondary and tertiary cultures. This property of growth *in vitro* is not limited to tissues of the lower animals, but is a characteristic also, at least to some extent, of human tissues; for these investigators succeeded in cultivating two human tumors, a sarcoma of the fibula and a carcinoma of the breast. In this connection it is interesting to note that a tumor grown outside of the body may also retain its malignant features; for a culture *in vitro* of the Rous fowl sarcoma when inoculated into a chicken caused the development of a sarcoma.

1. Harrison: Proc. Soc. Exper. Biol. and Med., 1907, iv, 140.
2. Burrows, Montrose T.: The Cultivation of Tissues of the Chick-Embryo Outside the Body, THE JOURNAL A. M. A., Dec. 10, 1910, p. 205.
3. Carrel, Alexis, and Burrows, Montrose T.: Cultivation of Adult Tissues and Organs Outside of the Body, THE JOURNAL A. M. A., Oct. 15, 1910, p. 1379.
4. The articles by Carrel and Burrows, as well as those to which reference is made later in this editorial, are to be found in the Journal of Experimental Medicine, April and May, 1911.

Lambert and Hanes have studied the question of cancer immunity by the method of cultivating tissues *in vitro*. They have found that "sarcoma cultivated in plasma from immune animals grows quite as vigorously as in plasma from normal and tumor-bearing animals, thus affording further proof of the absence of specific cytolytic substances in the body fluids of animals immune to transplantable cancer." Although animals may be successfully inoculated with sarcoma cultivated *in vitro*, there is evidence of diminished virulence. The duration of life of sarcoma cells grown in plasma seems dependent only on a renewal of the medium.

At Carrell's suggestion, Ruth has studied, also by this means, the phenomena which occur in the cicatrization of wounds, developing principles outlined earlier by Carrell. For the purpose Ruth used small fragments of the skin of guinea-pigs and frogs in the centers of which he made a rectangular wound. The skin of the guinea-pig developed in most instances connective tissue cells alone; but the skin of adult frogs generated epithelial cells almost exclusively. He states that repair of such wounds consists of three mechanisms, as follows:

1. Sliding of the epithelial edges of the wound toward the open central spaces, a process which occurs during the first six or twelve hours.

2. Epidermization, a stage during which there is a wandering out of epithelial cells from the edges of the shifted epithelium, either as isolated cells or as a thin continuous layer. These processes grow towards each other from opposing edges at a rate of about 0.06 mm. per hour, so that a wound of about 0.82 by 0.32 mm. may be completely covered by epithelium about ten hours after the preparation of the culture.

3. Progressive contraction of the original edges of the wound, with the result that the space between the edges diminishes and the epidermized surface may finally be less than one-fourth of the original area of the wound.

On the basis of Jacques Loeb's discovery that in certain marine animals growth is accelerated by a slight diminution and retarded by a slight increase in the osmotic tension of the surrounding fluid medium, Ruth found that the rate of growth of new epithelium was increased by a diluted medium both *in vitro* and *in vivo*. Thus, he was able to retard or to accelerate the rate of growth of epithelial cells by injections into his animals of hypertonic solutions or distilled water.

The technic employed by these various investigators consists essentially in placing small pieces of living tissue into fluid plasma which will coagulate immediately, and in maintaining the growth at the proper temperature. The observations are then made by keeping the cultures on a warm stage of a microscope. In a discussion of their methods Carrell and Burrows state that theoretically the technic is very simple and that it is not at all difficult to obtain at least some growth of a tissue *in vitro*.

5. Carrel, Alexis: The Treatment of Wounds, THE JOURNAL A. M. A., Dec. 17, 1910, p. 2148.

By modifying their technic somewhat Carrel and Burrows have made the very important observation that certain laws of growth discovered by Jacques Loeb in lower organisms are true also for higher organisms; and in this respect their results are in agreement with those of Ruth previously mentioned. On the assumption that the blood is not the best possible medium for the growth of tissues they attempted to discover as nearly as possible what constitutes an optimum medium. Their reasoning in this connection is very interesting. "If the blood were the best possible medium, the cells would grow without restraint, the organs and tissues would lose their relative size and morphology and the whole body would become monstrous. Therefore, it may be assumed that the power of growth is kept under constant restraint, that every organ is compelled to follow the morphologic plan of the organism and that normal plasma is far from being the optimum medium for the culture of normal cells." From their experiments, which consisted chiefly in altering the osmotic tension of the plasma, they conclude that each tissue has probably its optimum medium. In general, hypertonic solutions retarded and hypotonic solutions accelerated the growth of tissues. For the spleen (of a chick) the optimum medium seemed to be three volumes of plasma to two volumes of distilled water.

It is difficult to estimate the importance of this new work. It lays bare practically a whole new field for experimental attack on many of the most fundamental problems in biology and the medical sciences. For example, as Carrel states, the artificial growth of such glands as the thyroid may be the means of attacking the problems concerned with the various internal secretions; and the extension of such work as Ruth has inaugurated may lead to the possibility of artificially hastening the repair of surgical wounds. The importance of the work from the standpoint of the cancer problem is obvious.

THE ADVERTISERS' PROTECTIVE ASSOCIATION

Probably every newspaper and magazine in the United States has received, within the last week or ten days, a circular letter from an organization calling itself the "Advertisers' Protective Association" or, more briefly, the "A. P. A." No office address is given, but merely a post-office box number in New York City. The secretary of this association is Frederick W. Hooper, who asserts that this organization "is composed of manufacturers of foods, beverages and drugs, representing an investment of $400,000,000.00, whose advertising expenses are annually over $100,000,000.00." The circular letter is addressed "Dear Mr. Editor," and the opening paragraph reads:

> "During the past five years, the Bureau of Chemistry of the Department of Agriculture, has made a number of very vicious and uncalled-for assaults on foods, beverages and drugs, greatly to their injury, as well as *damaging to the Press which has been carrying the advertising contracts in these lines.* Many publications have, no doubt, felt the effect of these assaults *by a reduction in amount of advertising patronage from the manufacturers of* foods, beverages and *patent medicines.* We are, therefore, presenting the following facts, to show why the earning power of your publication has been, or will be, diminished in these lines, unless these attacks are stopped." [Italics ours.—ED.]

Then follows a scurrilous attack on Dr. Wiley, chief of the Bureau of Chemistry, because of his activity in repressing frauds in foods and drugs. The implication is made that Dr. Wiley was rewarded by the Kentucky whisky distillers because he fought the vile concoctions that are frequently sold as whisky; that he got some material benefit from Heinz, the pickle manufacturer, for his attitude against the use of sodium benzoate and, finally, that "in the fight on proprietary medicines, the American Medical Association, better known as the 'Doctors' Trust,' furnishes the sinews of war." The Advertisers' Protective Association tells the papers:

> "If this condition of affairs is not changed, *it will result in greatly cutting down the support you receive from the manufacturers of* almost numberless Foods, Beverages and *Proprietary or Patent Medicines*, and the question presents itself: Will you and your influential paper stand for such a condition? We think not!" [Italics again ours.—ED.]

The papers are then instructed: first, to bring pressure to bear on the Secretary of Agriculture and their congressmen and senators to curb the activities of the Bureau of Chemistry; second, "to take the matter up in the editorial columns" of their papers and show how Dr. Wiley is "squandering" the people's money "to advance the interests of . . . his particular friends." The letter closes by again urging the papers "to let your senators and your congressmen know your attitude in this matter," and it promises that if this is done "you will be rewarded . . . by an improvement in your [advertising?] business."

It is evident that the "Advertisers' Protective Association" is but a new alias for the "patent medicine" interests. Apparently, this circular is a final desperate attempt on the part of the nostrum-makers to retain their grip on the press of the country. It remains to be seen whether the American newspaper editor will jump at this crack of the whip or whether he has emancipated himself from the thraldom of "patent medicine" slavery.

It is significant that this wide-spread attempt to control the editorial policy of the newspapers of the United States by the promise of bribes in the form of advertising contracts should have been made at this time. In *Collier's* excellent series by Will Irwin on "The American Newspaper" the influence of the advertising department over the editorial policy of newspapers was being discussed at about the same time that the "A. P. A." sent out its circular letter.

We shall watch with interest the attitude of the press of the country in this matter. Will it maintain a "conspiracy of silence" and refuse to publish any matter that, while of vital interest to the public, may be inimical to the interests of its advertisers? Will it go

further and aggressively attack the admirable work that has been and is being done by the Bureau of Chemistry? We believe that it will do neither, but that it will assert itself as a free press should and, by exposing the methods of the "patent medicine" fakers and their attempt at intimidation and bribery, retain the prestige and influence which some of our American newspapers seem to have lost.

INACCURACY IN THYROID MEDICATION

Attention has again been called to the inaccuracy which characterizes much of the thyroid medication. In a recent publication, Beebe[1] discusses especially the wide variations in the iodin content of the thyroid most frequently used for medicinal purposes (that of the sheep), and advocates the use of an extract containing a standard amount of iodin.

There can be little doubt that the therapeutic efficiency of thyroid is largely determined by the iodin content, although, as Hunt and Seidell[2] pointed out three years ago, the clinical evidence for this, while very convincing so far as it goes, is not extensive. These authors found that the iodin content of most of the commercial dry thyroids on the American market ranged between 0.1 and 0.2 per cent. and suggested that it would perhaps be desirable to fix a standard of not less than 0.12 per cent. iodin for the official preparation. Since that time one firm has adopted a standard of not less than 0.2 per cent. and it is quite probable that the standard suggested above is too low. Whether, however, a standard as high as 0.2 per cent. for sheep thyroids would be feasible in this country seems open to doubt; with one exception the normal fresh sheep thyroids, the analyses of which are reported by Beebe, fell below 0.04 per cent. (which is equivalent to about 0.2 per cent. in the dried gland). There would probably be no difficulty in maintaining a standard of 0.2 per cent., however, if manufacturers were permitted by the Pharmacopeia to use the thyroids of hogs and beeves; according to the analyses both of Hunt and Seidell, and of Beebe, the thyroids of these animals contain a higher average of iodin than do those of the sheep.

Beebe suggests that if an extract containing a definite amount of iodin were adopted the question of the source of the material would become unimportant. It is a question, however, whether it is desirable still further to complicate the present situation by the introduction of special preparations, and whether the dried gland with a more definite percentage of iodin would not meet most needs. At least one extract, apparently practically identical with that proposed by Beebe, but with a smaller percentage of iodin, has been on the European market for many years, but does not seem to have proved distinctly more satisfactory than the dried gland.

1. Beebe: Am. Jour. Pharmacy, 1911, p. 56.
2. Hunt and Seidell: Hyg. Lab., Bull. 47, U. S. P. H. and M.-H. S., 1908; THE JOURNAL A. M. A., Oct. 24, 1908, p. 1385.

Although the varying amounts of iodin in the thyroid preparations constitute an important element in the inaccuracy of thyroid medication, a far more general source of inaccuracy is the uncritical way in which thyroid tablets are used. It may be that the tablet is the best and most convenient form of administering the drug (if the tablet is well chewed), but the use of tablets has led to great confusion and haziness as to dosage. This results in part from the fact, as pointed out by Hunt and Seidell, that different manufacturers express the weight of their tablets on different bases. Thus one firm's "5-grain tablet" means a tablet weighing 5 grains, but containing 2 grains of dried thyroid, or the equivalent of 10 to 14 grains of the fresh gland; another firm's "5-grain tablet" means a tablet containing dried thyroid equivalent to 5 grains of the fresh gland, etc. A still more confusing practice, which unfortunately has become very prevalent among physicians, is that of speaking of unspecified "tablets." A physician of some experience can frequently, although by no means always, guess at the size of the tablet meant, but the possibilities of error are obvious from the following example: One firm lists tablets of various sizes ranging from ½ to 5 grains, meaning that the tablets contain dried thyroid equivalent to from ½ to 5 grains of the fresh gland. As 1 part of the dried gland represents from 5 to 7 parts of the fresh gland, the weakest of these tablets contain but about 1/10 of a grain of the dried gland. A 2-grain "tablet" of one of the firms which base the weight on the amount of dried gland would thus contain twenty times as much of the drug. When it is further considered that the thyroid in some of these tablets contains four times as much iodin as that in other tablets, which presumably makes it four times as active, it is evident that one "tablet" may have the physiologic effect of eighty other "tablets." Although it is improbable that such extreme confusion happens often (the weakest tablets being prepared usually for special purposes), there is a distinct possibility of its occurrence.

Of course such a condition of affairs as to the dosage of a powerful drug like thyroid would ordinarily be intolerable, but the redeeming feature is that thyroid medication must of necessity be peculiarly individual; the correct dose is determined by the degree of thyroid deficiency to be met, and this can be determined only by repeated trials. But after the correct dose has been determined it is highly desirable that treatment be continued with a preparation of uniform activity; this is especially important if the treatment is to continue for months as is sometimes necessary.

These difficulties would be obviated if physicians would always base their dosage on the preparation of the Pharmacopeia; a further improvement would undoubtedly be the adoption by the latter of a standard iodin content.

THE EMASCULATED FOOD AND DRUGS ACT

The federal Food and Drugs Act, under the interpretation recently given it by the Supreme Court of the United States, has become practically a dead letter so far as it affords protection against the fraud and cruelty connected with the exploitation of "patent medicines." As was noted last week, the court has decided that the national pure food law does not prohibit false statements on labels or medicines so long as such statements are confined to curative effects and not to composition. To the average quack and "patent medicine" vender, such an interpretation will prove a priceless boon.

It should be borne in mind that the Food and Drugs Act does not require the composition of any "patent medicine" to be printed on the label; it does not even require the presence of any but a very few of the most powerful and dangerous drugs to be made public. A preparation may contain strychnin, prussic acid, arsenic or any one or more of a hundred equally dangerous and violent poisons and no mention need be made of the fact on the label. The "patent-medicine" faker cares little about restrictions regarding the composition of his nostrum; all he asks is permission to make any assertion that he sees fit regarding the curative effect of his preparation. The Supreme Court's decision means that that permission now exists under the federal Food and Drugs Act.

A weak solution of sugar or common table-salt in water, or for that matter a bottle of plain water, may now legally be labeled:

CANCEROID

A POSITIVE AND NEVER-FAILING CURE FOR CANCER, TUBERCULOSIS AND ALL OTHER DISEASES

GUARANTEED BY DR. QUACK UNDER THE FOOD AND DRUGS ACT.

Such a label, while a tissue of lies, is not illegal under the present pure food law. Hundreds of nostrum venders, when the Food and Drugs Act went into effect, had to discard their "sure-cure" labels because Dr. Wiley held that the law prohibited lying "in any particular." Now they can resurrect their old stock and send out their preparations labeled with the same unblushing falsehoods that were so common before the advent of the pure food law. Every "cancer-cure" faker, every "consumption-cure" swindler, every medical humbug of any kind or description can now resume his miserable trade with a feeling of perfect security, providing he is careful to make no misstatement regarding the composition of his wretched fraud. And he is not required to say a word about the composition of his nostrum unless it contains alcohol, morphin, acetanilid or one of the other eleven drugs or their derivatives that are specifically mentioned in the act!

From what has been said, it is evident that an amendment to the Food and Drugs Act is imperative. The law was passed, after years of opposition on the part of food dopers and "patent medicine" fakers, for but one object—the protection of the public health. As it now stands it fails to protect the public in a most vital particular, namely, against the cruelly fraudulent claims of the "sure-cure" school of swindlers. The law should be changed at the very earliest moment so that it shall specifically prohibit *every kind* of false statement regarding foods or medicinal preparations. The amendment, moreover, should be broad enough to prohibit lying regarding medicines and foods not only on the labels, but also in all advertising matter dealing with these special products.

SOME CONSIDERATIONS REGARDING THE USE OF DIPHTHERIA ANTITOXIN

There is no difference of opinion among unprejudiced observers as to the great life-saving value of diphtheria antitoxin. Carefully prepared and impartially analyzed statistics show that the average mortality from the disease prior to the introduction of the antitoxin as a therapeutic measure has been reduced one-half or more under the employment of this agent. In addition, the duration of the individual attack is shortened and its severity lessened. Among other things, unpleasant sequels, such as the paralysis resulting from peripheral neuritis, have become less frequent. Moreover, through the employment of prophylactic injections the spread of the disease has been checked and in numerous instances local epidemics have by the same means been brought to an end.

It was recognized even early in the history of the treatment that the procedure was not unattended with possibilities of danger. Perhaps the first death in the sequence of an injection of diphtheria antitoxin was that of the child of a German physician. The cause of the untoward result in this case, as well as in others that have since been reported, is involved in some obscurity, although it was supposed to reside in the condition of lymphatism, attended with persistence of the thymus gland and hyperplasia of lymphatic structures in various parts of the body. Less severe complications, such as articular swelling and pain, cutaneous exanthemata and other constitutional phenomena also have been observed. These have been referred to the serum in which the antitoxic principles are contained. The reactions noted are at the present time comprehended in the term "anaphylaxis," and are looked on as expressions of hypersusceptibility to specific protein substances. The phenomenon has been carefully studied by numerous investigators, and much has been learned with respect to its occurrence, but no satisfactory means of preventing it has yet been discovered.

Next in importance to the acceptance of the specific therapeutic value of diphtheria antitoxin is its early routine employment, for it has been demonstrated beyond question that the good results from its use are directly proportionate to the promptness with which it is administered. As the antitoxic principles are themselves innocuous, there is no rigid limitation as to the dosage

of the serum apart from the effect to be secured. Accordingly, the practitioner has no choice in the presence of a case of actual diphtheria. When, however, the nature of the disease is doubtful or merely suspicious, or in case of exposure to infection, there may be a question as to the wisdom or the necessity of injecting antitoxin, in view of the possibility of unforeseen complications developing. An interesting discussion of this phase of the subject is presented by Dr. E. W. Goodall[1] in a recent communication based on an experience with diphtheria, for eight years prior to the introduction of the antitoxin treatment and for the sixteen years that have elapsed since. As he points out, the symptoms due to the serum itself, consisting of fever and rash—urticaria or erythema—and observed as well when similar treatment is employed in cases of tetanus, streptococcus infection and typhoid fever, occur in about 35 per cent. of the cases, while in 3 or 4 per cent. there occur also articular manifestations of an inflammatory character. These phenomena set in from one to three weeks after the injection. While unpleasant, they are unattended with danger, and they constitute no contra-indication to antitoxin treatment. In other cases, however, particularly when a second injection is given, the symptoms attain a greater degree of severity, and they may set in after the interval mentioned or after a shorter interval—from twelve hours to six days—or even within a still shorter interval—from a few minutes to six hours. In addition to the rash, which may involve a large area of the cutaneous surface and probably mucous membranes also, the temperature becomes elevated, the skin cyanotic and rigors occur. There may also be collapse or convulsions and drowsiness. These phenomena develop, however, only when the second or subsequent injection is given later than ten days after the preceding one. In one instance the interval was as long as seven and one-half years. On the other hand, the reaction does not appear in every case of reinjection. In yet a small number of cases grave symptoms—intense dyspnea, with failure of respiration and collapse—appear after a primary injection of serum. Many of the patients in this group have been sufferers from asthma or some allied disorder or possess an idiosyncrasy to horses.

Therefore, great care and discrimination should be exercised in the prophylactic administration of diphtheria antitoxin. Not only may a person so treated prove hypersensitive, but he would be rendered so in the event of a subsequent injection becoming necessary for remedial purposes. In cases of doubt or suspicion antitoxin treatment should be given only when the larynx is involved. In cases of undoubted diphtheria, antitoxin should be administered without delay or hesitation except in the presence of asthma, and then a decision will have to be reached from the gravity of the symptoms. The earlier the treatment is instituted the smaller will be the dose required and the less, therefore, the danger of reaction.

1. Goodall, E. W.: Brit. Med. Jour., Feb. 11, 1911, p. 292; abstr. in THE JOURNAL, March 11, 1911, p. 779.

VOLUNTARY CLOSING OF MEDICAL COLLEGES

Out of the ten medical colleges in Missouri, the University Medical College of Kansas City was one of four which were listed among acceptable (Class A) medical colleges by the Council on Medical Education in its classification published last year. The position of this school has been maintained under many difficulties, dependent as it was on the tuition fees received from its students supplemented by gratuitous services and personal sacrifices on the part of its faculty. And now the trustees and faculty have decided to close the doors of the college permanently at the end of the present session. According to a statement published elsewhere in this issue—a statement which should be read by all who are interested in medical education—the college was closed in recognition of the marvelous progress which has been made in medical science in the last quarter of a century; a progress that has made necessary not only higher preliminary qualifications for those who are to study medicine, but also the possession by the medical college of thoroughly equipped laboratories, of more extensive clinical facilities and of a corps of teachers—trained specialists in their various subjects—some of whom, at least, must devote their entire time to teaching and to research.

The faculty fully realized that an increase in the standards of admission would mean a reduction in the number of students and a corresponding reduction in the already seriously limited income of the medical school; nevertheless, at the beginning of this its last session, a higher entrance requirement, a year of college work, was made effective. To make other needed improvements, to obtain the additional laboratory equipment and the expert instructors, it was recognized that funds from some source aside from students' fees were absolutely essential. A larger enrolment of medical students and a greatly increased tuition fee, which might have enabled the college to make the desired improvements, were out of the question since there continued to exist many less particular medical colleges which were ready to accept students with almost any preliminary education. After a long and fruitless effort to secure the needed funds, therefore, the trustees and faculty of the University Medical College preferred to close the doors and to retain the college's good name rather than to continue it other than as a first-grade and an honorable school.

But while honor is due to the men who are willing thus to sacrifice their personal interests and ambition in order that the future physicians may be well educated, it is to be regretted that one of the medical schools of the better grade is thus closed while scores of schools much inferior to it continue to exist. The faculties of the latter schools will probably welcome the closing of this conscientious competitor, since, of course, they will gain in numbers—and dollars—thereby. These inferior schools will doubtless continue to sing their own praises and to accept the fees of unqualified students so long

as inadequate or unenforced legal requirements will permit. Medical colleges of the better class may be depended on to keep abreast of the progress in medical education or voluntarily to close their doors; those that are purely commercial will continue in the old rut. It is high time, not only that medical students should be warned regarding the handicap that goes with a diploma from a low-grade medical school, but also that the public should be safeguarded against the ill-trained output of these institutions.

Current Comment

PUBLIC PARKS AND THE PHYSICIAN

The value of public parks and playgrounds to the great mass of city dwellers is now generally recognized, but in the rapid growth of our cities timely provision for parks is usually overlooked until business and material interests have so much encroached on the available spaces that their conversion into parks is so expensive as to be almost prohibitory. As a consequence, these lungs of the cities are, too often, utterly inadequate. While it is true that the health of the workers in a city is one of its most valuable assets from a purely material point of view, as conducing to efficiency and increased output, yet it is a matter of slow and difficult progress to bring the business portion of the community to realize the direct importance of a matter, which, at first sight, seems to affect them so remotely. The movement for parks and playgrounds belongs to preventive medicine, in the modern conception of that subject. It is, therefore, the opportunity and the duty of the physician, as a public-spirited citizen, to exercise foresight in this matter, and to use his influence in securing adequate parks, playgrounds and breathing-spaces for the people. Physicians have not been entirely remiss in this matter; on the contrary, in many places they have been the leaders in this work, as they should be everywhere. Many American cities have realized the value of parks and playgrounds and have spent large sums of money in providing them. Some are splendidly equipped in this respect; so much so that in the recent meetings in Europe, concerning the town-planning and city beautification movement, some of our cities were cited as models to be imitated by the older urban centers of Europe. Berlin is one of these cities that has recently taken up the matter of providing a system of forest reserves or parks just outside the city, as well as several within the city limits, to give greater opportunity to the people for outdoor air, exercise and recreation—a *receptaculum oxygenii*, as they have been termed. The chairman of a committee having in charge this park promotion enterprise in Berlin recommends that the physicians, with the architects, should be the leading spirits in the hygiene of the masses, and says that it is a matter of reproach that millions are spent on sanatoriums for the treatment of tuberculosis, while no adequate provision is made for giving the masses the air and light and opportunity for recreation which would largely help to prevent the condition which these sanatoriums try to cure at such great expense.

THE DOMESTICATED SERPENT VERSUS THE DOMESTIC CAT

The domestic cat has been sentenced to banishment by the modern hygienist because of the alleged fact that she harbors germs in her long hair and is subject to diphtheria and, perhaps, other infectious diseases which may be communicated to human beings, chiefly the children who play with her. The faithful dog, particularly the house-dog, with his long hair and his repertoire of wheezes and distempers, due largely to too much pampering, is also under suspicion. Thus, two of our most cherished and time-honored associations are threatened by the ruthless hand of science. The faithfulness and cheerful companionship of Fido, and the purring domesticity of Tabby are to weigh as nothing against the teachings of preventive medicine. The alleged rat-killing habit of the cat, even in the face of the demonstrated fact that rats convey plague, is not to be considered as a mitigating circumstance in her favor. Professor Sambon, a London authority on tropical diseases, including the various forms of plague, is against the cat and suggests a substitute rat-catcher and vermin-exterminator in the form of a wriggling, gleaming, non-venomous snake. He cites history in support of his contention that the snake is the proper substitute for the cat. He calls attention to the ancient practice in Egypt and elsewhere of keeping domesticated snakes to rid the premises of vermin and suggests the revival of this practice for the extermination of rats. The snake has no long hair; he is, in consequence, alleged to be somewhat more hygienic. And, indeed, in some tropical and semitropical countries to-day, snakes are tolerated, if not domesticated. The value of snakes in ridding the fields of rats and mice which destroy the farmer's grain was referred to in an editorial on birds[1] last week. We are reminded that the caduceus with the twining serpents has constituted the symbol of medicine from the time of Æsculapius, or even before, and is a recognition of the sanitary significance of the snake. Can it be that in this day of the turning topsy-turvy of many traditions the despised snake is coming into his own again, and that the modern science of hygiene and sanitation will accord him his ancient and honorable place in medicine? Are we to say, *Vale* the infectious cat and dog, and *Salve* the snake?

THE WHITE RACE IN THE TROPICS

The evidence given by Dr. Gorgas of the healthfulness, under proper sanitation, of the tropics for white men is supported by that of Dr. Victor G. Heiser, chief of the health department in the Philippines. He finds the death-rate there among government employees for the past year to be at the astonishingly low figure of 5.82 per thousand. Even after allowing for the selected character of the employees and the absence of young children and very old people among them, this rate, he says, is still lower than that of the civilian population of any other tropical country. He also adds that, in his opinion, if the simple essential rules of hygienic living were more closely observed the death-rate could be still further lowered. It has been said that Americans tend

1. Our Vanishing Shore-Birds, THE JOURNAL A. M. A., June 3, 1911, p. 1658.

to become enervated and lazy in tropical countries, but this has been contradicted. It is asserted by others that a reasonable amount of active exercise under proper conditions is as essential to health in tropical as in temperate regions. These facts and views are not in agreement with those expressed by Woodruff and others, who hold that the white race necessarily degenerates in hot regions and is at its best only in a cool and cloudy climate. However this may be, it must be admitted that the tropics have not been fairly tried by the white race. In the past this was impossible, as we have only lately acquired some of the more important data needed to guide us in our utilization of tropical regions. One point may be mentioned, however, on which there is still some difference of opinion; this is the need of alcohol as a protection against some of the dangers incurred in those regions. There has been a rather wide-spread notion, which is still somewhat supported by medical authority, that the moderate use of alcoholic drinks is a prophylactic against some tropical diseases. The best authorities, however, give this notion little support. A recent German writer (Riegel), summing up the data from the military history of operations in tropical and subtropical countries, emphatically condemns the use of alcohol in any expedition in tropical regions. Many white men carry drinking habits into warm countries or acquire them there under the impression that alcohol is a defense against the deteriorating effects of the climate. With our more recently acquired knowledge of tropical diseases many of the old arguments in favor of its use certainly fail. The idea of the general deterioration of the white race in warm countries will possibly become as obsolete as those formerly held concerning many of the tropical diseases have become. Even the so-called tropical neurasthenia may prove to be avoidable. Then, if we realize our sanitary ideals, the pressure of population, as Dr. Gorgas has pointed out, will demand the full utilization of these most productive portions of the earth.

PANAMA AN OBJECT-LESSON TO CIVILIZATION

The report of the Department of Sanitation of the Isthmian Canal Commission for the month of March, just issued, indicates that the Canal Zone, formerly swept by disease and pestilence but now policed by Colonel Gorgas and his sanitary inspectors, is as safe a place as any on earth for a white man or woman to live. During the month of March, there were only forty-three deaths from all causes among 47,935 employees. Sixteen of these deaths were from violence, and twenty-seven were from disease. Of these victims twenty-three were colored and four were Italian or Spanish. Not a single white American man died of disease. Still more striking are the figures for white employees and their families from the United States. In this class, there are, at present, 10,299 persons in the Canal Zone. Out of this number, equivalent to the entire population of an average American city, there were only ten deaths. Of these, three white employees from the United States, out of a total number of 6,017, died as the result of accident; none died as the result of disease. Out of 4,282 white women and children from the United States, there were only seven deaths. An analysis of the causes of these deaths is especially instructive. One woman, aged 81, died of chronic nephritis. One infant lived only two and a half hours, as the result of premature birth; three women, aged 22, 27 and 41, died as the result of complications due to pregnancy. All of these deaths can be regarded as, in a measure, unavoidable. Only two cases of death of white Americans from preventable disease remain; one woman, aged 32, and one child, aged three years, both of whom died of pneumonia. And this out of a total number of white women and children of over 4,000 and a total number of white Americans of over 10,000. Has any such record in the elimination of disease ever before been established or even dreamed of? The present population of the Canal Zone, is, it is true, composed of young, vigorous and carefully selected persons, and some allowance must be made for this fact. Yet as good results can be secured in any community in the United States, if the intelligent, painstaking, scientific methods followed by Colonel Gorgas and his subordinates are only adopted. If the Panama Canal should serve no other purpose than that of an object-lesson in sanitation, it will be worth to the United States and the civilized world far more than its total cost. The world has been shown that preventable disease is the result of ignorance and indifference and that in view of our present knowledge of the causes and methods of prevention of disease its continued existence is discreditable to modern civilization.

Medical News

CALIFORNIA

Medical Officers Entertained.—On May 18 the San Diego County Medical Society and the Physicians' Club of San Diego entertained the medical officers of the army and navy, on duty at and near San Diego, at an informal smoker at the University Club.

Personal.—Dr. Robert O. Moody, San Francisco, associate professor of anatomy in the University of California, has been given leave of absence for the first half year.——Dr. J. G. Fitzgerald has been appointed associate professor of bacteriology in the University of California.——Dr. Lyman H. Case, Santa Monica, who has been seriously ill with inflammatory rheumatism, is reported to be improving.——The house of Dr. Joseph K. Swindt, Pomona, was destroyed by fire, May 20, with a loss of $6,000.

COLORADO

Medical Institute Caught.—The Dr. Rhodes Institute, Denver, an advertising concern, and "Dr." Richard J. Brown, connected with the institute, are said to have been declared guilty of fraud and ordered to pay damages of $4,000 to S. A. Combs by the district court May 26. It was alleged that Combs had been treated by Dr. Brown for hernia by paraffin injections.

Mortality of 1909.—According to Bulletin 108 of the State Board of Health, there was a slight increase during the year in the death-rate which is due, probably, to the increased number of tuberculous patients who have gone to Colorado in an advanced stage of the disease. The highest mortality at all ages occurred in March, and the lowest in June. Both of these agree with the figures for the entire registration area.

Children's Pavilion at Children's Hospital.—The Children's Pavilion Association of the Denver County Hospital has abandoned the plan of having a pavilion in the grounds of the County Hospital and will unite with the Children's Hospital Association. The hospital will be enlarged and will receive, at the expense of the county, all children who would otherwise be sent to the County Hospital. The association cleared $1,300 for its Easter ball.

DISTRICT OF COLUMBIA

Tuberculosis Camp Opened.—The Red Cross Tuberculosis Day Camp was opened May 2 and four tents have been erected and fitted up for the accommodation of additional patients. The camp is being operated under the auspices of the District of Columbia Red Cross Chapter. During last year more than eighty patients were admitted to the camp.

Supervisors Sued.—The District of Columbia Medical Board of Supervisors, which has the power of granting licenses to practice medicine, has been sued for reciprocal license by Dr. Thomas V. Hammond who claims reciprocal license by reason of a license he holds from the State of Maryland. The board is said to be exceedingly careful in the matter of issuing licenses as there are at present more than 1,500 physicians registered in Washington, all of whom are supposed to be engaged in active practice.

ILLINOIS

Tag Day in Lake County.—Lake County celebrated its annual tag day, June 3. The proceeds, estimated at about $5,000, will be divided between the Lake Bluff Orphanage, the Lake County Tuberculosis Institute (which maintains a tent colony), and the Jane McAlister Hospital, Waukegan.

Personal.—Dr. Robert S. McCaughey and family, Hoopeston, have sailed for Europe.——Dr. Charles True, Kankakee, is reported to be seriously ill as the result of cerebral hemorrhage.——Dr. Harry S. Oyler, Lincoln, sustained painful injuries in a runaway accident, in which his buggy was demolished, May 27.——Dr. Lewis H. Skaggs, Ellsworth, is reported to be seriously ill.

Chicago

Personal.—Dr. Frank Edward Simpson has returned from abroad.——Dr. Duncan B. McEachern has been appointed temporary superintendent of the Contagious Disease Hospital. ——Dr. Rudolph Vlach sailed for Europe, May 30.

Gradle Memorial Collection.—The extensive private medical library of about 5,000 volumes, collected by the late Dr. Henry Gradle, has been presented by Mrs. Gradle and her children to the trustees of the Crerar Library and will be known as the Henry Gradle Memorial Collection.

Hyde Memorial Services.—Services in memory of Prof. James Nevins Hyde will be held in the upper amphitheater of Rush Medical College, June 12, at 11 a. m. The medical profession is invited to participate in these services. The memorial address will be by Dr. J. B. Herrick.

Another Tuberculosis Hospital.—At a meeting of the Jewish Consumptive Relief Society, recently, it was decided to erect a tuberculosis hospital to cost $75,000. A sinking fund of $3,000 has been set aside, and on June 4 a vaudeville performance is to be given at the Colonial for the benefit of this worthy charity.

Intern Examination.—The deputy warden of Cook County Hospital states that the figures as given in the news item in THE JOURNAL of May 27, regarding the result of the intern examinations were incorrect, and that, of the first fifty places on the eligible list of interns of Cook County Hospital, Northwestern University Medical School received 17, Rush Medical College 16, the College of Physicians 10, Bennett Medical College 6, and the Chicago College of Medicine and Surgery 1. ——One hundred and seventy women physicians of Chicago gave a dinner, June 1, to the three women who passed the recent examinations for interns at Cook County Hospital.

The New Health Commissioner.—Mayor Harrison has selected Dr. George Bright Young, United States Public Health and Marine-Hospital Service, as health commissioner of Chicago, succeeding Dr. William A. Evans, who has made so distinguished a record in that office. The mayor's choice meets with general approval. Dr. Young was born in New Orleans, May 12, 1860. In 1870 his family moved to Charlottesville, Va., where he received his academic education at the University of Virginia. He took the first year of his medical course at the University of Virginia and completed it at the University of Maryland, Baltimore, from which he graduated in 1887. Jan. 30, 1890, he entered the United States Marine-Hospital Service as Assistant Surgeon; in 1894 he was made Passed Assistant Surgeon, and, on Dec. 10, 1905, was promoted to Surgeon. Dr. Young has an enviable record of service. For three years he was in charge of the national quarantine at Delaware Breakwater. During the prevalence of cholera in Europe in 1893 Dr. Young was one of the officers sent by the service to take charge of the shipment of emigrants and cargoes from the various ports. He had charge of all traffic from Southern Italy and the Island of Sicily, with headquarters at Naples. This duty continued for about a year. One of its results was to demonstrate the sufficiency of the national quarantine regulations, for it so happened that while vessels were leaving for United States, other vessels of exactly the same character and carrying passengers and cargoes of identical origins were leaving for various ports in South America, and while not a case of cholera developed on any vessel from Naples after the regulations were put in force, every vessel not handled by Dr. Young had severe outbreaks of cholera and lost from 25 to 200 passengers. During the yellow fever outbreak in 1897 he had charge of interstate quarantine in portions of Tennessee, Mississippi, Alabama and Arkansas, at which time he established the first extensive system of train inspection. In 1898 he was detailed in the office of the surgeon-general for duty in connection with the supervision of the general quarantine operations of the service during the epidemic of that year. In 1905 he had charge of the operations of the service in a considerable portion of the South, including the supervision of the work done during the outbreaks in Natchez, Miss., Lake Providence, La., and Hamburg, Miss., and the interstate quarantine controlling train inspection and similar matters in a territory embracing nearly all of Mississippi, portions of Louisiana, Alabama, Tennessee and Kentucky. During the past six years Dr. Young has been stationed in Chicago where he has been active in sanitary work, in addition to his service as superintendent of the U. S. Marine Hospital. For several years he has been a member and is now president of the Lake Michigan Water Commission, he was a member of the City Milk Commission and is a member of the City Club's committee on insect pests. He has represented the United States Public Health and Marine-Hospital Service in the House of Delegates of the American Medical Association for the last four years, and in its Council on Medical Legislation and Council on Medical Education. The appointment of Dr. Young is an augury for efficient service, unhampered by political pledges or promises.

INDIANA

Hydrophobia Fund.—More than $1,200 has been accumulated by the auditor of the state for the care of indigent persons affected with hydrophobia. The last legislature passed an act providing that 5 per cent. of the surplus dog fund in every county should be turned over to the state for this purpose.

Personal.—Dr. Nelson J. Shook, Kendallville, fractured his clavicle and was painfully cut about the face and hands by the overturning of his automobile while making a professional call, May 27.——Dr. Charles L. Dreese, Goshen, was attacked by an insane patient, May 22, and seriously injured.——Dr. William H. Johnson, Indianapolis, who has been seriously ill, is convalescent and has resumed practice.

IOWA

The State Society.—Dr. Lawrence W. Littig, Davenport, was elected president of the Iowa State Medical Society at the last meeting. Dr. William B. Small, Waterloo, the treasurer, was reelected, and Dr. Granville N. Ryan, Des Moines, is the new trustee, Dr. Thomas E. Powers, Clarinda, holding over.

Woman's Hospital Planned.—The Iowa State Association of Medical Women and the City Federation of Women's Clubs of Des Moines plan the establishment of a hospital for women in Des Moines. The clinic maintained during the last year for women and children has been far more successful than was expected and the necessity of a hospital to give care exclusively to women and children not able to pay for the regular hospital care is apparent.

LOUISIANA

State Society Meeting.—The thirty-second annual meeting of the Louisiana State Medical Society was held in Shreveport, May 30-June 1, under the presidency of Dr. Edwin J. Graner, New Orleans. New Orleans was selected as the place of meeting for 1912 and the following officers were elected: president, Dr. Richard O. Simmons, Alexandria; vice-presidents, Drs. James C. Willis, Shreveport, Benjamin A. Ledbetter, New Orleans, and E. Otis Edgarton, Arcadia; secretary, Dr. Joseph Denegre Martin, New Orleans (reelected); treasurer, Dr. Charles C. Bass, New Orleans (reelected); delegates to the American Medical Association, Drs. Charles Chassaignac, New Orleans, and Oscar Dowling, Shreveport, and alternates, the secretary and Dr. Robert H. Blackman, Monroe.

MARYLAND

Hospital Changes Hands.—The sisters of charity have purchased for $26,000 and taken possession of the Allegheny Hospital, Cumberland. The capacity of the institution will be doubled.

Personal.—Dr. Jeptha E. Pitsnogle, Hagerstown, has been appointed health officer and Dr. William D. Campbell assistant health officer of Washington County.——Drs. Thomas C. Bussey, Texas, and Frank H. Ruhl, Lansdowne, who recently had cerebral hemorrhages, are reported to be improving.

Psychiatrists for Social Service Work.—The Maryland Psychiatric Society is raising a fund of $2,500 to employ a trained psychiatrist to do social service work. This will embrace efforts for the prevention of insanity and for the after-care of those discharged as cured. He will visit state hospitals and study the patients. He will also visit the homes of discharged patients and endeavor to find suitable occupations for them. The society is preparing the first issue of a publication to be known as "The Maryland Psychiatric Quarterly."

Baltimore

Addition to Institution.—A large addition is to be made to Mount Hope Retreat, a private institution for nervous and insane patients, under the care of Roman Catholic sisters. Two additional wings are to be built, two stories high, and the improvement will cost about $90,000.

Personal.—Dr. Julius W. Schlieder is reported to be seriously ill with septicemia, due to an operation wound.——Dr. John McF. Bergland is to be resident physician at Biddeford Pool, Me., this summer.——Dr. William Simon, Catonsville, is convalescent after typhoid fever.——Dr. Lewellys F. Barker has recovered from his recent operation and resumed practice. ——Drs. Hugh H. Young, Emil Novak and Anton G. Rytina will spend the summer abroad.——Drs. Leo J. Goldbach and Herbert E. Laroque have sailed for Europe.

MASSACHUSETTS

Personal.—Dr. John M. Martin, Boston, has been appointed a school physician vice Dr. John L. Ames.——Dr. Albert M. Dunlap has been appointed a member of the faculty of Harvard Medical School recently established at Shanghai, China, and will sail for his new post of duty this month.

County Medical Society Meeting.—Hampshire District Medical Society held its annual meeting in Northampton, May 12. Dr. George B. Shattuck, Boston, president of the Massachusetts Medical Society, delivered an address on the work of that organization. Dr. Nelson C. Haskell, Amherst, was elected president; Dr. Maurice W. Pearson, Ware, vice-president; Dr. Albert M. Belden, Northampton, secretary; Dr. Justus G. Hanson, Northampton, treasurer, and Dr. William J. Collins, Northampton, librarian.

New Hospital.—Plans have been perfected by many physicians and business men of Boston to supply that city with a large private hospital providing the best of medical treatment to patients willing to pay for private rooms and special care. The hospital will be incorporated with a capital stock of $500,000 and the board of directors includes the following physicians: Drs. Arthur T. Cabot, William T. Councilman, Reginald H. Fitz, Joseph L. Goodale, Francis B. Harrington, Henry Jackson, Robert W. Lovett, John L. Morse, Edward Reynolds, Maurice H. Richardson, Frederick C. Shattuck, Edward W. Taylor, Paul Thorndike and John Collins Warren.

MICHIGAN

Names School for Physician.—One of the two new grade schools of Pontiac is to be known as the John P. Wilson School in honor of the practitioner of that name who was one of the prominent men of the city during and after the Civil War.

Antituberculosis Societies.—Dr. Fred R. Waldron has been elected president of the Ann Arbor Society for the Prevention of Tuberculosis, vice Rev. Carl S. Patton, resigned. It was reported that there are now three patients at Camp Lookout and it was decided to hold an annual tag day during the last week in October.——The organization of the Adrian and Lenawee Antituberculosis Society was perfected at a meeting held, May 24. Dr. Esli T. Morden was elected secretary-treasurer of the Association.

Personal.—Major John V. Frazier, Lapeer, has been detailed to the maneuver camp at San Antonio.——Dr. Elizabeth M. Hooper, Port Huron, was the guest of honor at a dinner given in Des Moines by the examiners of the Ladies of the Maccabees, April 29.——Dr. Philander B. Wright has resumed practice at Grand Rapids after an absence of three years.——Dr. David Ralston has been appointed health officer of Cadillac for the eighth consecutive term.——Dr. and Mrs. Periam B. Hardy, Tecumseh, sailed for Vienna, June 24.——Dr. Enoch M. Mather, Detroit, was painfully injured in a collision between his motor car and a trolley car, May 18.——Dr. John H. DeMay has been elected health officer and Dr. Roy W. Chivers secretary of the Board of Health of Jackson.

MISSOURI

State Tuberculosis Board Meeting.—At the annual meeting of the State Board for the Prevention of Tuberculosis, held in Jefferson City, May 31, the following officers were elected: Dr. Herman E. Pearse, Kansas City, president, and Drs. R. M. Funkhouser, George W. Heuman and James Stewart, St. Louis, Edward W. Schauffler, Kansas City, Gustave Ettmueller, Jefferson City, and William S. Allee, Olean, members of the executive committee.

New Hospital for Kansas City.—Mr. R. A. Long has endowed the Christian Church Hospital in Kansas City with $200,000 in addition to the $150,000 already pledged in popular subscriptions. Dr. William E. Minor and the architect have returned after a visit to the hospitals of the chief cities of the East and Middle West. The chief aims in the construction of this hospital are to be plenty of ground room, a building freely equipped with roof gardens, sun parlors and sleeping porches. The construction of the new hospital is to begin early in 1912.

Personal.—Dr. and Mrs. Joe Carter Weston have started for Europe.——Drs. D. R. Russell, E. A. Pond, Ralph A. Shiras, Joseph L. McDermott, Darwin De Lap and David Robinson have been appointed ambulance surgeons by the Hospital and Health Board of Kansas City.——Dr. Calvin C. Leeper, Braymer, has been reappointed president of the board of control of the State Industrial Home for Girls, Chillicothe.——Dr. Albert J. Campbell, Sedalia, has been elected a director of the Missouri Association for the Relief of Tuberculosis.——Lieut. Laurence C. Cook, M. C., N. G. Mo., Webb City, has been detailed to duty at the maneuver camp on the Texas frontier.

St. Louis

Wins Damage Suit.—Dr. George Tracewell, St. Louis, who entered suit against the United Railway Company of St. Louis for $20,000 actual and $10,000 punitive damages, on account of damages said to have been sustained by his forcible expulsion from a Wellston car in 1909, was awarded $5,000 actual damages and $1,000 punitive damages by the supreme court, May 24.

NEW HAMPSHIRE

New Head of Department.—Dr. Frederick P. Lord, Iowa City, formerly connected with the department of anatomy of the State University of Iowa, College of Medicine, has been secured as the head of the department of anatomy of Dartmouth Medical School, Hanover. Dr. Lord assumes his new duties at the beginning of the next college session.

New Hospital Dedicated.—The Bigelow Memorial Hospital, North Conway, erected for the use of the public by Mrs. Helen Bigelow in memory of her parents, was formally dedicated, May 18. The hospital is located midway between North Conway and Intervale. It is on the cottage plan, with all wards and operating departments on the first floor, and has accomodation for twenty patients.

NEW JERSEY

Bequest.—By the will of the late George A. Bertin, who died in Tunis, in December last, $100,000 is bequeathed to the Children's Seaside Home, Atlantic City.

Money for Preventorium.—Through the efforts of Mrs. J. Borden Harriman, a friend has contributed $50,000 toward the completion of the proposed additions to the buildings of the Tuberculosis Preventorium for Children, Farmingdale. It is said that $23,000 is still needed to bring up the capacity of the institution to its proposed 158 beds, and that $55,000 a year, of which $30,000 has already been pledged, will be required to support the institution.

Health Officers' Association Organized.—The Health Officers' Association of New Jersey met for organization, May 24, at Newark, thirty-three health officers, inspectors and members of local health boards being present. The objects of the association, as stated, are the advancement of knowledge relating to public health and sanitation, and the promotion of social intercourse among health officials. The active members include employees of local and state boards of health, that is to say, health officers and sanitary inspectors, while members of the State Board of Health and local boards of health are eligible to associate membership. The officers of the association are as follows: president, Chester H. Wells, Montclair; vice-president, John O'Brien, Jr., Plainfield; secretary-treasurer, J. Scott MacNutt, Orange, and chairman of executive committee, Dr. Edward Guion, Atlantic City.

NEW YORK

New Hospitals.—The necessary capital has been subscribed for a town hospital for the town of Union to be located in the Bible School building, Lestershire, which will be remodeled for the purpose. The hospital will have accommodation for at least thirty patients and is expected to be ready for occupancy by August.——Dr. Frank W. Sears, Binghamton, announces that his private hospital will be ready to receive patients June 15. The institution is to be known as the Terrace Hospital.

Objection to Hospital Clause.—The State Charities Aid Association has submitted a brief to the senate cities committee opposing those parts of the new charter for New York which would abolish the trustees of Bellevue and the allied hospitals and the board of inebriety and create a department of hospitals. The association says that the trustees of Bellevue and the allied hospitals have succeeded in establishing public confidence in Bellevue and it would be unwise to dismiss them in the midst of their work. The brief also opposes the proposed department of hospitals on the ground that it would not in reality be a department of hospitals, as much of the hospital work would fall under the department of public charities.

New York City

Personal.—The following sailed for Europe on June 3: Dr. David J. Dickson, Dr. and Mrs. Alfred J. Newman, Dr. and Mrs. Julius R. Fabricus and Dr. and Mrs. William G. Wylie. ——Dr. Ernest Sachs has been appointed associate in surgery at Washington University, St. Louis.

Brooklyn Hospital to be Rebuilt.—Plans are in preparation for the rebuilding of the Brooklyn Hospital on DeKalb Avenue and Raymond Street. Twelve new buildings will be erected at a cost of about $1,000,000. A gift of $100,000 has already been received for the construction of a dispensary in memory of the late William H. Harriman.

New Official for Bellevue.—Dr. Walter H. Connolly has been appointed first deputy medical superintendent of Bellevue and the allied hospitals. This position was vacated in February when Dr. Winford H. Smith went to Johns Hopkins and Dr. George O'Hanlon, Kings Park, was advanced to fill the vacancy. If the Municipal Civil Service Commission approves the appointment Dr. Connolly will succeed Dr. O'Hanlon.

Boy's Health League Exhibit.—The De Witt Clinton High School has an association called the De Witt Clinton High School Health League, having about 1,600 members, which is holding an exhibit to show what they have accomplished in four months. They have been so successful and the power of the coming generation in bringing about better health conditions is so generally conceded that an effort will be made during the coming summer to organize all high schools throughout the country into a national league. It is proposed to send the exhibit out to other schools as a model.

Prevention of Infant Mortality.—The Health Commission announces in the Bulletin of May 23 the outline of the plan of the department to reduce the mortality of infants with especial reference to diarrheal diseases. Since May 1 the nurses detailed to schools in the congested districts where the death and birth rates are both high have been visiting the houses where the greatest number of births have occurred since June 1. Each nurse devotes half a day to this work and is required to have under her care seventy-five babies, making visits to each at least once in ten days, and keeping and forwarding daily reports and case records. After June 15 each nurse will be required to have 150 babies under her charge. Nine infants' milk stations have been opened in the city, at each of which a nurse is in attendance, and four more stations will be opened at an early date. During May lectures were given in the public schools to all girls over 12 years of age regarding the care of infants, and, where the need seems evident, "Little Mothers" leagues have been formed. Lecture centers for conferences with mothers with instruction as to the care of well babies and medical attendance for sick babies will be established in the recreation centers, recreation piers and play-grounds.

NORTH CAROLINA

Lightning Strikes Hospital.—St. Agnes Hospital at Raleigh was struck by lightning recently setting fire to the building and resulting in a loss of more than $3,000 to the structure. Fortunately no lives were lost.

College Notes.—Work has begun on the new building authorized by the legislature for the medical department of the university at Chapel Hill, and it is expected the building will be ready in September. The legislature appropriated $37,000 for this purpose.

Hookworm Hospital.—Dr. John A. Ferrel, Kenansville, assistant secretary of the State Board of Health for Hookworm, announces that a special field hospital will be established for the reception and treatment of cases of hookworm in the southeastern section of the state.

Large Endowment for Hospital.—The "Moses H. Cone Memorial Hospital of Greensboro" was incorporated by the secretary of state last week to build a mammoth hospital in Greensboro to cost $1,000,000 as a memorial to the most wealthy citizen of that town who recently died. Work will begin shortly. An auxiliary hospital will also be built at Blowing Rock.

OHIO

Tuberculosis Educational Contests.—Prizes were recently given to the school children of Cincinnati for the best tuberculosis alphabet. Through the cooperation of the Cincinnati *Times-Star*, the Cincinnati Antituberculosis League was able to make the campaign a great success from an educational point of view. Cardinal principles about tuberculosis were emphasized in the minds of thousands of young persons, and the results will be better health. The answer considered the best of all was: "A is for Alcohol, which men should not drink. It weakens their systems and makes their lungs a prey to the consumptive germs." Another letter from the prize-winning alphabet is: "F is for Fight. The only way to get rid of tuberculosis is to fight it and fight it hard." An alliterative contribution is found in the letter D: "D is for Determined Doctors, who fight damp, dusty, dirty dwelling-houses and deadly public drinking-vessels, which destroy, diminish and detract from domestic happiness and increase the death-rate from the dreadful disease, consumption." Mayor Schwab, who acted as one of the judges in the contest, praises the plan and says that it accomplished a vast amount of good in that it helped spread among the youth information regarding one of the worst plagues of the race. The complete prize-winning alphabet is printed in the *Journal of the Outdoor Life* for May.

PENNSYLVANIA

Legislature Thanks Mrs. Dixon.—In a resolution passed by the legislature, Mrs. Samuel G. Dixon, wife of the state commissioner of health, is thanked for the donation to the commonwealth of the Union Chapel at the Pennsylvania State South Mountain Sanatorium, Mount Alto, as a place of worship for the tuberculous patients at the sanatorium and the attendants.

Testimonial to Health Commissioner.—The board of health of the city of Erie has given a strong testimonial to the efficient work done by the State Department of Health in assisting the local health authorities to put down the recent typhoid fever epidemic in that city. The board especially commends the promptness of the response for assistance, the haste with which the body of assistants was dispatched, the thorough method of their work, and the efficient and competent work of the two nurses who were sent by the commissioner. City councils of Erie also adopted resolutions of thanks and appreciation for the excellent work accomplished by the State Department of Health.

Alumnæ Meet.—The thirty-sixth annual meeting of the Alumnæ Association of the Women's Medical College of Pennsylvania was held at the college building in Philadelphia, June 1-2. The fellowship fund of $500 for six months' study abroad was completed by the alumnæ during the session and was awarded by the recommendation of the faculty and the consent of the alumnæ present to Dr. Martha Tracy, Philadelphia, 1904, associate professor of chemistry and director of the laboratory of chemistry. An endowment fund committee was appointed with Dr. Blanca H. Hillman, 1905, chairman. This committee intends to raise $500,000 to equip more fully the laboratories, to increase inadequate salaries, and to aid in research work.

Philadelphia

Southwark Medical Library.—The contract has been awarded for the erection of the Southwark Branch of the Public Libary System of Philadelphia. The Committee on Medical Libraries of the Philadelphia County Medical Society hopes to have plans completed to install a medical book and magazine section when the building is finished.

College Additions.—Plans for the new five-story addition, 50 by 150 feet to be built on the south side of Cherry Street, west of Seventeenth, and for the new one-story dispensary 60 by 180 feet for the Medico-Chirurgical College have been

presented by the architect.——Plans are being prepared for alterations to the University Hospital, Thirty-Fourth and Spruce Streets, and for remodeling the Nurses' Home.

College Commencements.—The fifty-ninth annual commencement of the Women's Medical College of Pennsylvania was held May 31. Dr. Harvey W. Wiley delivered the address and thirty-two women received the degree of doctor of medicine. ——The eighty-sixth annual graduation exercises of Jefferson Medical College were held June 5. The valedictory address was delivered by Surgeon-General Charles F. Stokes of the United States Navy, and 117 men graduated. The Corinna Borden Keen Research Fellowship was awarded to Dr. Warren B. Davis (Class of 1910). This carries an award of $1,000 and a year's study and research in Europe or elsewhere.

Swimming for Public School Children.—With the consent of Alfred S. Eisenhower, chief of the bureau of city property, six of the city's free bath houses will be devoted to the use of public school children on certain days of each week during ten weeks beginning June 22 and ending August 31. Men and women teachers of swimming will be engaged and free lessons given to the boys and girls of the four grades. William A. Stecher, director of physical instruction, is responsible for this movement as he pointed out to the committee that the report of the coroner showed that 143 persons were drowned last summer.

Wholesome Food and Backward Children.—The University of Pennsylvania will conduct a psychologic clinic this summer and the effect of wholesome food on backward and mentally deficient children will be one of the special studies of the course. Mrs. Louise S. Bryant, of the Russell Sage Foundation, New York, who has made a special study of dietetics, will conduct these experiments. Working with Mrs. Bryant in the school attached to the clinic will be Miss Elizabeth Farrell, in charge of the ungraded classes in the New York public schools, and two specialists in the training of backward children, Miss Walsh and Mrs. Pfeifer, of the Russell Sage Foundation. Beside the work in the clinic and school, the parents of the children will be visited and instructions as to the selection and proper preparation of food will be given.

Personal.—Dr. James C. Wilson has resigned as professor of practice of medicine in Jefferson Medical College.——Drs. W. M. Late Coplin, Edward T. Reichert and J. Nicholas Mitchell have sailed for Europe.——Dr. Michael T. Prendergast is seriously ill in Ocean City, N. J.——Dr. George J. Holtzhausser sailed for Europe May 24.——Dr. Louis Fisher of the staff of the Mount Sinai Hospital was the guest of honor at a banquet given by the members of the staff of that hospital at Mosebach's Casino on May 26. Dr. Fisher has sailed for Europe.——Dr. Edwin A. Jerecki, chief resident of the Jewish Hospital, was given a testimonial dinner at the Mercantile Club, May 20, by the hospital staff and board of officers prior to his departure for Europe, May 27.——Dr. Alfred Stengel sailed for Europe June 8.——At a meeting of the medical staff of the Jewish Hospital the nomination of Dr. Myer Solis-Cohen and Dr. Hervey L. Bates were forwarded to the board of trustees to fill the two vacancies of pediatrist in the hospital staff. Both are chiefs of the children's dispensaries at the hospital.——Dr. George W. Norris has been elected visiting physician to the Episcopal Hospital, vice Dr. David L. Edsall, resigned.——Dr. John Henry W. Rhein has been elected professor of diseases of the nervous system in the Philadelphia Polyclinic and College for Graduates in Medicine.

VIRGINIA

Elections.—At the annual meeting of the South Piedmont Medical Society, held in Lynchburg, the following officers were elected: president, Dr. James S. Haile, Chatham; vice-presidents, Drs. Adam T. Finch, Chase City; Henry W. Dew, Lynchburg, Henry C. Beckett, Scottsburg, and Wm. O. Smith, Altavista; and secretary-treasurer, Dr. George A. Stover, South Boston.——The Staunton Post-Graduate Medical School, at its meeting May 10, elected Dr. Hunter B. Spencer, dean; Dr. Walter F. Hartman, Swoope, vice-dean; Dr. Alexander J. Burkholder, recorder, and Dr. John F. Armentrout, treasurer.

Personal.—Dr. George W. Brown, Saluda, has succeeded Dr. Oliver C. Brunk, resigned, as superintendent of the Eastern Hospital, Williamsburg.——Dr. Albert S. Priddy, Keysville, has been elected superintendent of the epileptic colony, Lynchburg.——Dr. Joseph S. De Jarnette has been reelected superintendent of the Western State Hospital, Staunton, and Dr. Wm. F. Drewry, superintendent of the Central Hospital for Colored Insane, Petersburg, and Dr. John C. King, superintendent of the Southwestern State Hospital, Marion.——Dr. Schuyler B. Moon has been appointed to succeed the late Dr Adolph G. Hoen as director of the Pasteur Institute of Virginia at the University College of Medicine, Richmond.

GENERAL NEWS

National Antituberculosis Association to Meet.—The seventh annual meeting of the National Association for the Study and Prevention of Tuberculosis will be held at the Brown Palace Hotel, Denver, Colo., June 20 and 21, and on the latter day a meeting will also be held of the Southwestern Conference on Tuberculosis under the chairmanship of Dr. William M. Brumby, San Antonio, Tex. The work of the association will be under three sections; pathologic, clinical and sociologic. The subject for discussion in the advisory council is "Official Responsibility in the Tuberculosis Problem."

Ashford's Work in Porto Rico.—The astonishing record made by Major Bailey K. Ashford, Med. Corps, U. S. Army, in his fight against the hookworm in Porto Rico was testified to by Gov. George R. Colton, of that island, who arrived in New York from Washington on April 26 on his way back to San Juan. According to the *Army and Navy Journal*, he said that 300,000 cases of the hookworm had been cured in the island, and that the disease has been virtually eradicated in the towns and low country, though still prevalent in the coffee district and hill country, where about three-fourths of the population is affected, reducing the value of labor 50 per cent. Governor Colton considers the island ideal for a winter resort, and expects to see it soon become a Mecca for northern tourists in the cold months. Last year the island was visited by 8,000 tourists. The exterior trade of the island has grown from $17,000,000 in 1901 to $68,000,000 in 1910. The health and sanitation service has been conducted by the municipalities, but Governor Colton has been in Washington seeking congressional authority to designate an officer of the Medical Corps, U. S. Army, as director of sanitation, expecting to appoint Major Ashford to that position.

Elections in Special Societies.—The American Dermatological Association, at its thirty-fifth annual meeting held in Boston, May 25-27, selected St. Louis as the next place of meeting and elected Dr. Grover William Wende, Buffalo, as president; Dr. James Sullivan Howe, Boston, vice-president; Dr. James MacFarlane Winfield, Brooklyn, N. Y., secretary and treasurer, and Dr. William Allen Pusey, Chicago, councilor at large.——The thirty-third annual meeting of the American Laryngological Association was held in Philadelphia, May 29-31; the following officers were elected: president, Dr. James E. Newcomb, New York City; vice-presidents, Drs. Frederick C. Cobb, Boston, and Burt R. Shurly, Detroit, Mich.; secretary and treasurer, Dr. Harmon Smith, New York City, and librarian, Dr. Joseph H. Bryan, Washington, D. C.——The American Gynecological Society held its annual meeting in Atlantic City, May 23-25, and elected the following officers: president, Dr. Howard A. Kelly, Baltimore; vice-presidents, Drs. Richard R. Smith, Grand Rapids, Mich., and John A. Sampson, Albany, N. Y.; secretary, Dr. J. Le Roy Brown, New York City (reelected); treasurer, Dr. J. Wesley Bovee, Washington, D. C. (reelected); and councilors, Drs. Reuben Peterson, Ann Arbor, Mich., Franklyn S. Newell, Boston, and Walter W. Chipman, Montreal. Baltimore was selected as the next place for meeting.

Yellow Fever Bulletin.—Although yellow fever seems to have been practically eliminated from the United States, Cuba and the Canal Zone by the measures adopted since the demonstrations of Reed and Carroll and their fellow workers concerning it, yet the disease is still a serious one in many parts of the world. In some of the West Indies, in Central and South America, and especially in Africa, the disease is practically always present. In West Africa, which is being rapidly opened up to settlement and exploitation, the disease is a serious handicap to the development of the country. In 1910 there were extensive epidemics on the west coast. Recognizing the importance of this disease the Liverpool School of Tropical Medicine has begun the publication of a monthly bulletin devoted exclusively to yellow fever. The first number has just appeared and its forty-four pages contain an interesting review of the yellow fever situation in all parts of the world. It contains a number of papers on this disease and discussions by eminent men at the last meeting of the Society of Tropical Medicine and Hygiene; abstracts from other journals, some editorial comment and a bibliography of the publications on yellow fever during 1910 and 1911. This bibliography will be continued and it is hoped to form a complete library on the subject of yellow fever. The School of Tropical Medicine deserves commendation and encouragement for this additional weapon in the fight against yellow fever.

Antivivisectionists' Prayers.—The following prayer has been circulated widely in England: "O God of mercy, send kind death to thy dear dumb creatures, left tortured and agonizing in the laboratories, when the vivisectors go home to dine and sleep." The petition is entitled "My Last Prayer at Night," and is signed by one C. L. Perkins, captain of the royal navy. Recently an attempt of the New England Antivivisection Society to get the clergymen of New England to offer this prayer called forth the following spirited letter from one of them, which appeared in the Boston *Herald*, May 17: "What a delicious paradox this is! Here is a man whose only business is, in time of war, to maim and slaughter his fellowmen, praying every night against those whose profession is to save human life. I think I see him at one moment urging his gunners to rake the enemy's decks fore and aft, yelling like an Ashanti, 'Give 'em h—l, boys!' and several hours later, kneeling in pink pajamas before his berth, slobbering a few maudlin tears over the cats and dogs and rabbits which he thinks the vivisectors have left in their misery. You have asked me, Captain Perkins, to adopt your daily petition as my own. I am almost willing to say yes, but on one condition. Will you offer a prayer of mine, not every day, but once in a while, at least? This is the prayer which I wish you, captain, and all others of your rank might offer: 'O God of nations, send kind death to thy poor soldiers and sailors left mangled and moaning after the battle, while the captains and the kings sit down to celebrate their victory in wine and song. Remember, we beseech Thee, the widows and little children made desolate by brutal conflicts of greed and plunder, brought on too often by an insensate thirst for glory and reward. Save us, our Father, from all who in their blindness foment jealousy between nations and hatred among races, and most of all from those who for the sake of gold would plunge their country into the hellishness of war.' But perhaps I have taken the captain and his prayer too seriously. The card is doubtless a new device in pamphleteering, and a rather clever one, were it not for the stupid blunder of giving the occupation of the writer. I cannot offer such a prayer as this. I know too well the blessings that vivisection has brought to mankind. For my part, I prefer to offer a prayer which will include both sides: for the vivisectors, that they may ever be kept from causing unnecessary pain; for the antivivisectionists, that they may be given that due sense of proportion which will turn them from misdirected sentiment and set their moral enthusiasm free for attacking the really great and sinister evils that beset society."

Permanent Commission for International Medical Congresses.—The offices of the permanent commission are at The Hague, but the first meeting of the commission was held at London in April with Dr. F. W. Pavy in the chair. Among the points considered was the request to include Spanish and Esperanto among the official languages of the international medical congresses. This request was voted down, it being considered inadvisable to add another to the official languages already adopted; in regard to Esperanto, it was stated that it is a language still too little known to be taken into consideration. The International Federation of Dentists had requested that dentists not possessing a medical degree might participate in the congress, but this was also voted down, the commission believing that it is necessary to maintain the general principle that only qualified physicians are eligible to membership in the congress. At the same time the commission calls attention to the statute in the regulations to the effect that scientists presented by national committees or by the executive board can be admitted to membership in the congress. The request of Canada and Poland to be allowed the right to be represented in the international permanent commission was denied, the commission having made it a principle that representation in the permanent commission is to be restricted to delegates from strictly national committees. The organized profession in lower Austria had petitioned for the creation of a section for medical economics, but the commission declined to consider this in view of the fact that all the congresses previously held have been of a purely scientific character and the commission desires to maintain this character.

One of the principal features of the work of the permanent commission is to keep in touch with the boards of international societies and congresses so that coincidences of time, place and subjects may be avoided, and the study of questions requiring international cooperation may be promoted and committees appointed for the purpose. It was voted that the permanent central offices for the international specialist medical congresses can be installed at the central office of the permanent commission. The president or secretary of the permanent boards of the international specialist congresses may be invited to attend the conferences of the permanent commission, and the secretary of the latter may be invited to attend the meetings of the permanent boards of the specialist congresses when subjects of mutual interest are to be discussed, but without the right to vote. The members of the permanent commission include ex officio the presidents and secretaries-general of the last and the approaching international medical congress, a secretary-general and assistant secretary, the president of the international association of the medical press, ex officio, and a delegate from each national committee, the delegate to be elected by the other members of the national committee.

The date for the next medical congress was appointed as August 6 to 12, 1913, the interval between the congresses having been lengthened to four years. The secretary-general is Dr. W. P. Herringham, 40 Wimpole Street, London, W. All suggestions and demands in regard to the international medical congresses should be made to the secretary-general of the permanent commission, Prof. H. Burger, Vondelstraat I, Amsterdam, or to the office of the permanent commission, in charge of P. M. van der Haer, assistant secretary, Hugo de Grootstraat 10, The Hague, Holland. Further particulars were given in THE JOURNAL, April 8, 1911, page 1074.

CANADA

New Sanatorium.—A new sanatorium is to be erected on the bank of the Red River in Elmwood, Winnipeg, by a company headed by Dr. A. D. Carscadden. The building will be four stories and a basement in height, 54 by 85 feet, and will cost $70,000.

Donations to Library.—Dr. Casey A. Wood, Chicago, has donated to the McGill University Medical Library a collection of rare works on diseases and surgery of the eye. Dr. Gordon W. Byers, Montreal, has added to this, 2,500 valuable reprints on ophthalmology. Dr. Wm. Osler and Sir Lauder Brunton have recently sent out a series of magnificent engravings for the new home of the library at Montreal.

Personal.—Dr. John T. Fotheringham, Toronto, is in charge of the medical services of the coronation contingent from Canada.——Dr. Roger Doyen, son of Professor Doyen of the Doyen Institute, Paris, France, is establishing a dispensary for the cure of tuberculosis cases in Montreal.——Dr. Ridley Mackenzie, Montreal, has returned from Europe.——Dr. Charles Kirk Clarke, superintendent of the Hospital for the Insane, Toronto, has been appointed superintendent of the Toronto General Hospital, vice Dr. John N. E. Brown, retired.

Dominion Anti-Tuberculosis Association.—The Canadian Association for the Prevention of Tuberculosis met in London, May 17 and 18, under the presidency of Dr. J. George Adami, Montreal. It was reported that the death rate from tuberculosis had decreased in ten years in Ontario from 11.8 per cent. to 7.6 per cent. A feature of the meeting was the report on the work of the "Hygienic Nine," bands of women of nine who conducted educational classes through the medium of hygienic lectures. Municipal health officers were criticized for their laxity in promoting campaigns with regard to tuberculosis. Dr. J. George Adami was reelected president and Dr. George D. Porter, Toronto, secretary. The next meeting will take place in Toronto.

Hospital News.—Toronto is to have a new private hospital with accommodation for sixty to one hundred patients. Dr. John N. E. Brown, late superintendent of the Toronto General Hospital, is to be in charge.——Dr. Charles K. Clarke, superintendent of the Toronto Hospital for the Insane, has been appointed superintendent of the Toronto General Hospital. Dr. Clarke is dean of the medical faculty of Toronto University. This will bring the two institutions into closer relationship.——Dr. William C. Barber, late of the Rockwood Hospital for the Insane at Kingston, is to establish a large private sanitarium at Orillia, Ont.——Dr. J. M. Forster, superintendent of the Hospital for the Insane at Brockville, has been appointed superintendent of the Toronto Hospital for the Insane.——Dr. John C. Mitchell of the Hamilton Hospital has been appointed superintendent of the Brockville institution.

Society Meetings.—Alberta Medical Association met in Edmonton the last week in April and elected Dr. Park, Edmonton, president; Dr. Frank W. Crang, Strathcona, vice-president, and Dr. George McDonald, Calgary, registrar.—— The fourth annual meeting of the Toronto Academy of Medicine was held in their new quarters in Queen's Park and the following fellows were elected as officers and council: president, Dr. Newton A. Powel; vice-president, Dr. Richard A. Reeve; past president, Dr. Harley Smith; honorary treasurer, Dr.

William A. Young; chairmen of sections—medicine, Dr. Graham Chambers; surgery, Dr. Herbert A. Bruce; pediatrics, Dr. John T. Fotheringham; pathology, Dr. John J. McKenzie; ophthalmology, Dr. Chas. Trow; state medicine, Dr. John S. McCullough, and elective members, Drs. John Ferguson, William J. Malloch, Herbert J. Hamilton, James F. W. Ross, Patrick W. H. McKeown, Alexander McPhedran, Fred N. G. Starr, and Edmund E. King.

Meeting of Ontario Medical Association.—The thirtieth annual meeting of the Ontario Medical Association was held in Niagara Falls, Ontario, May 30 to June 1, under the presidency of Dr. Henry R. Casgrain, Windsor, Ont., Dr. F. Arnold Clarkson, Toronto, acting as general secretary. The address in medicine was delivered by Dr. Thomas B. Futcher, Baltimore, who took for his subject "The Relationship Between the Ductless Glands and Carbohydrate Metabolism," and the address in surgery, by Dr. Alexander E. Garrow, Montreal. A resolution was adopted calling for provision to be made at each general hospital in the province for the care of tuberculosis cases. It also recommended that any general hospital refusing to provide wards for such cases should be reported to the provincial government and have their annual grant withdrawn. Another discussion receiving considerable attention was that of infant mortality, the chief health officer for the province recommending that mothers should be recompensed with a small sum when each of their children reached five years of age. The report of the special committee on the revision of the constitution was adopted whereby the Ontario Medical Association would become a branch of the Canadian Medical Association. The following officers were elected: President, Dr. Herbert A. Bruce, Toronto; vice-presidents, Drs. Frank E. Wilson, Niagara Falls, William Hall, Brampton, Frederick P. Drake, London, George H. Field, Coburg; treasurer, Dr. James H. Mullin, Hamilton; and general secretary, Dr. F. Arnold Clarkson, Toronto.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, May 27, 1911.

The National Insurance Bill

The medical profession, which is notoriously difficult to move in political matters, has been thoroughly roused by the national insurance bill, which threatens it with an economic revolution unprecedented in its history. Meetings to consider the bill are being held all over the country and a special representative meeting of the British Medical Association will be held in a few days. Both the medical and the lay press are deluged with letters from doctors protesting against the bill. The total conversion of practice among men with incomes below $800 into contract practice is viewed with dismay. The contract practice of the friendly societies is tolerated by the profession as a necessary evil because many of the members are not in a position to pay the regular fees and it has always been considered a grievance that patients who can afford to pay fees should be admitted into such societies. Under the present bill this would occur on a large scale, as many men with incomes from $500 to $800 can afford to pay, and do pay, fees. Moreover a large disadvantage, the magnitude of which is difficult to gauge, will be introduced by the admission of all persons, however weak or subject to disease. Under the friendly societies a medical examination has to be passed before admission. A strong feeling exists in the profession that payment should be made for work done and not by capitation fee. But this is open to the grave objection that it would encourage malingering, as the shortening of illness would be in the interest of neither doctor nor patient. It is also felt that no person with an income of $400 should be eligible for medical benefits. If payment is to be made by capitation fee, the one proposed, $1.25, is considered inadequate and a fee of $2 is suggested. The appearance of the bill has already affected doctors injuriously as practices are becoming unsalable. Many men are bitterly complaining that a practice for which a few years ago they paid $5,000 is quite unmarketable. It also seems that the bill will have a most injurious effect on the funds of the voluntary hospitals. At present much money is derived from contributions by employers and workmen. It is thought that when the bill becomes law the employers will not be so willing to contribute to the hospitals as they will already be compelled to contribute toward the sickness benefit of the men. The latter will also be less willing or less able to pay, as a compulsory deduction will be made from their wages under the bill.

The Census

A preliminary report has been made on the census which was taken at the beginning of this year. The population of England and Wales is found to be in round numbers 36,000,000—an increase of 3,500,000 over the last census in 1901. The percentage rate of increase is 10.91, which shows a diminution of the rate of the previous decade. In 1881 the percentage was 14.36, in 1891 11.65, and in 1901 12.87. The population of London is now 7,250,000, but this increase has taken place entirely in the "outer ring," where it amounts to 33 per cent. The development of tube railways, motor bus services, and electric transit generally has offered great facilities for getting out of the crowded centers. Hence there has been a great movement of population not only from the centers, but also from the inner to the outer suburbs. The population of Ireland, as in the past, shows a decrease. In the ten years this amounts to 76,824, or 1.7 per cent. The population now is 4,381,951. There are only three towns with a population over 50,000—Belfast, 385,492; Dublin, 309,272, and Cork, 102,274.

Is a Doctor a Workman?

An interesting legal point under the Workmen's Compensation Act has arisen in consequence of a doctor who had been house-surgeon at the Kidderminster Infirmary claiming compensation for injuries arising out of his employment. His salary was $500 a year with board and lodging. When he first took office there was no *x*-ray apparatus but after a time one was installed which it was decided to use in some cases of ringworm. Before doing so, after consultation with one of the honorary surgeons, it was decided to try the apparatus on the house-surgeon's arm to test the effect of the treatment. Though the application lasted only fifteen minutes the results were so serious that he had to submit to an operation on the arm and the wound took six weeks to heal. The applicant stated that the experiment was carried out for the benefit of the patients. Medical witnesses said that it was his duty to submit to experiment, although they admitted that his duties were prescribed by the rules of the institution which had not been altered since the apparatus was introduced. In giving judgment the judge said that it did not follow because a new knife was introduced a house surgeon should allow the knife to be tried on his body. According to the terms of the applicant's contract with the infirmary it was clear that the question of a dangerous experiment did not arise on his appointment. He accordingly dismissed the application but gave leave to appeal. The question whether the doctor was a "workman" within the meaning of the Workmen's Compensation Act was not definitely decided by the judge but the point on which he gave judgment and the leave to appeal indicate that he regarded the applicant as such.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, May 19, 1911.

Vital Statistics in France in 1910

The *Journal Officiel* will soon publish statistics for the population of 1910. The following are the essential figures, with a total population of 39,961,945.

Number of living births	774,358
Number of deaths	703,777
Number of marriages	309,289
Number of divorces	13,049

The births exceed those of 1909 by 4,389, but the advantage is very slight; the number is practically the same as that of the three preceding years, during which it was lower than it had previously been for more than one hundred years. In 1859, there were in France 1,018,000 births, and this figure was just about maintained up to 1868. Then it fell to 948,000. From 1868 to 1886 the figures began with a 9. After 1887 it was reduced to 899,000 and continued to be written with an initial 8 until 1906. For four years it has fallen to the figure 7, and the year 1909 also confirms this decadence.

The death-rate was extraordinarily low in 1910, but on close inspection not much reason for congratulation is found. If there are few deaths that is due, in great part, to the fact that there are few births. In fact, there were in 1910 only 90,000 deaths of children of 1 year of age and under. This figure, when compared with that of the births (774,358), represents a mortality of 12 per cent. In 1906 the mortality was about the same (14 per cent.), but as there were more births (807,000) this mortality produces 116,000 deaths or 26,000 more than to-day. Consequently, the diminishing of

the number of infantile deaths is due, not to improvement, for the chances of death remain about the same, but to the constant decline of the birth-rate.

Can this lamentable situation be improved? Dr. Jacques Bertillon, head of the municipal statistics of the city of Paris, believes that it can. In support of his view he cites the increased number of marriages which he attributes to the influence exercised by the law of 1907, which has simplified the formalities of marriage. The following are the number of marriages in France:

Before the law of June 21, 1907:

	First Semester	Second Semester
1902	152,890	141,896
1903	152,386	143,610
1904	152,454	146,267
1905	153,812	148,811
1906	154,800	151,687
1907	154,081	.....

After the law of June 21, 1907:

	First Semester	Second Semester
1907	.....	160,822
1908	162,495	153,433
1909	156,294	151,657
1910	156,761	152,728

In Belgium a similar law has exercised an analogous influence; marriages have become more numerous and earlier, while illegitimate births have become rarer and legitimate births have increased. Likewise, in Bavaria, a similar law has had important consequences on the birth-rate and the increase of the population. Dr. Bertillon believes, therefore, that there is no reason to say that the legislator is impotent against a moral evil. There is, he believes, no adequate physiologic or economic reason why France should not increase like all other countries.

Memorial to Dr. Mesny

The commission charged with the administration of the Carnegie Foundation for recompensing acts of heroism, has just awarded the golden medal with a gift of $5,000 (25,000 francs) to Mme. Gérald Mesny as a memorial of her husband, whose heroic death in Manchuria has been mentioned (THE JOURNAL, March 18, 1911, p. 826). Moreover, the members of the international conference on the plague assembled at Mukden, visited the tomb of Dr. Mesny at Harbin in a body and Dr. Broquet, delegate of the French government, made a touching speech.

New Director-General of the Vaccine Institute

On May 16, the Académie de médecine nominated a new director-general of the Institut supérieur de vaccine to succeed Professor Kelsch, who died last February. Dr. Robert Wurtz, agrégé professor at the Faculté de médecine de Paris and physician of the hospitals, was unanimously chosen. He is a son of the illustrious chemist who was one of the most distinguished professors of the Faculté de médecine de Paris. Dr. Robert Wurtz is known especially for his works on bacteriology, hygiene and epidemiology. He was, for a long time, in charge of the mission at Abyssinia, where he was on various occasions, called to give attention to Emperor Menelik. Some weeks ago, he visited Guinea and the Congo to study sleeping-sickness and other exotic diseases.

A New Procedure in Radiotherapy

At the same session, Dr. Béclère read before the Académie de médecine a report on the work of Dr. Haret, assistant in radiotherapy at the Hôpital Saint-Antoine, the introduction of the radium ion into pathologic tissues without breaking the skin. The procedure consists in employing electrolysis to make the radium, under the form of ions, penetrate through the skin into the cellular elements of the neoplasms. The technic is as follows: application on the diseased region of the positive electrode composed of a compress saturated with a solution of 10 micrograms of radium bromid; passage of a current of 10 milliamperes for thirty minutes; three sittings a week. Dr. Haret's therapeutic attempts along this line have as a scientific base a whole series of experimental researches on rabbits and young cattle. These researches have shown that electrolysis causes the radium ions to penetrate through the unbroken skin into the subjacent tissues, aponeurosis, muscle, periosteum and bone, and that it reaches the depth of at least 9 cm. (about 3½ inches), accumulates there in heavy doses and remains for more than fifteen days without injury to the healthy cellular elements or to the general condition of the experimental animal. These experiments have shown the harmlessness and the legitimacy of this new method of radiotherapy. The application of these experimental data to the treatment of neoplasms has already furnished Dr. Haret about ten observations, of which the most important concerned a large sarcoma of the shoulder-blade in a young woman of 27. This sarcoma, after having diminished considerably in volume under the influence of Roentgen rays, remained stationary with persistent pains, but after several treatments with radium introduced by electrolysis, the pain ceased, the tumor diminished and finally disappeared completely. Although this new method of radiotherapy has not always been followed with such favorable results, Dr. Béclère believes that it justifies serious hopes. Up to the present, it has been employed alone, but it may be predicted that it will often be combined advantageously with radium irradiations and that the domain of the application will be extensive like that of the Roentgen rays.

Diet in Typhoid Fever

At the same session, Dr. H. Vaquez, physician of the hospitals of Paris, called the attention of the academy to recent changes in the ideas with regard to the diet of typhoid patients. Some Russian and German physicians have not hesitated to depart from the strict milk diet, and Dr. Vaquez has followed their example by instituting various régimes of which milk still constitutes a part, but in which porridges, eggs, purées, creams and raw and rare meat are also used.

Some have considered this diet imprudent at least. It has been accused of causing grave complications, such as intestinal perforation and hemorrhage, and of augmenting the chances of relapse. To these altogether theoretical criticisms, Vaquez opposes facts. Varied diet in connection with systematic balneotherapy in 160 cases has resulted in fifteen deaths, of which three were caused by intestinal perforation. He has had only eight cases of intestinal hemorrhage, of which only two were serious. There were twenty-two relapses. These results are not materially different from those of the best statistics obtained with treatment by other methods. It should be added that the duration of typhoid fever was much shortened, and that, in particular, the period of descending oscillations was remarkably shorter. The fall of temperature often occurred, not as lysis, but abruptly, as in pneumonia. Complications connected with secondary infections were very exceptional. They were confined to four cases of phlebitis, three of pyelonephritis, one of cholecystitis, one of otitis and one of subcutaneous abscess.

Dr. Vaquez concludes, therefore, that varied diet in typhoid fever does not produce the ill effects which have been attributed to it, but that, on the contrary, it is capable of facilitating the favorable outcome of the disease and of protecting the patient from the secondary complications which so often make the prognosis unfavorable.

Personal

On May 9, the Académie de médecine elected a member in the section of pathologic anatomy to replace Dr. Lancereaux, who died last October. Dr. Achard, who was elected, was born in 1860. He was formerly a pupil of Professor Lannelongue and collaborated with Professor Debove in editing several manuals of medicine. He was physician at the Hôpital Necker, and last year was appointed to the chair of general pathology at the Faculté de médecine de Paris, where he succeeded Professor Bouchard.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, May 18, 1911.

Personal

Surgeon-General Dr. Villaret, a military surgeon of high rank, died May 9, aged 64. Villaret rendered a not inconsiderable service to the development of military sanitation and also showed a manifold literary activity, being especially widely known as the editor of the dictionary of universal medicine (*Handwörterbuch der gesamten Medizin*).

Increased Municipal Hospital Facilities

The deputation for municipal hospitals determined at a recent session to rebuild and extend the municipal hospitals to the extent that seems necessary as soon as possible. A hospital is to be erected for prostitutes and one for infectious diseases at the Urban Hospital and also a hospital for children in the south part of Berlin, in which nurslings and

children affected with whooping-cough shall be admitted. The erection of another large general hospital is considered not necessary in the immediate future on the assumption that mild cases, convalescents, contagious and tuberculous cases will be removed from the present municipal hospitals and provided for in homes, forest stations, pest houses, etc.

Campaign Against Tuberculosis in Rural Districts

Robert Koch assigned the spread of the disease in country districts and the lack of suitable efforts against it as one of the reasons for the fact that the reduction of the average mortality from tuberculosis in Germany and in many other European countries has come to a standstill during recent years. With his characteristic thoroughness he endeavored to discover the reason for this situation, and he gave the impetus to exact researches in those country districts of Prussia in which the tuberculosis mortality was the highest and the conditions for investigation were the most favorable. These studies were undertaken by Professor Jacob, a former assistant of von Leyden and on account of the recommendation of Koch himself were carried out with the assistance of the Prussian minister of education first in the Osnabrück district in the province of Hanover. The results of these studies have just been published by Professor Jacob. As his conclusions are of value, not only for the affected district but also generally for Germany and other countries as well, I give a summary of them here: According to Professor Jacob, the tuberculosis dispensaries in the cities do not afford data for a clear idea of the conditions in regard to tuberculosis in the country. The inquiry would better be made in the homes of the peasants themselves by means of a question-blank filled out by especially trained visiting nurses. Medical examinations of children should be extended to all children attending school and as far as possible, to those who are not yet required to attend. For establishing the diagnosis of tuberculosis von Pirquet's test should be applied as far as possible. Medical examination of adults should be made in all cases of tuberculosis and all cases that are suspected to be tuberculous. For the purpose of more exact determination of the mortality from tuberculosis, an obligatory medical examination of dead bodies should be required for at least one or two years, with a corresponding remuneration for the physicians. All results obtained should be transmitted to a central aid station for the district and should be further elaborated by the chief. An important reason for the origin and spread of tuberculosis is to be found in the unhygienic character of the dwellings. In the country, particularly, tuberculosis for this reason may be put in the first place as a house disease. In addition, insufficient hygiene of schools with reference to the school houses and also the nutrition and care of school children in other matters, must be taken into consideration. The nutrition of children in the country by cow's milk is, almost without exception, completely inadequate. The same is true with reference to the supply of meat, eggs, fresh vegetables, etc Alcoholism is very wide-spread in the country districts. All these elements diminish the physical resistance of the people and increase the predisposition to tuberculosis. Cleanliness, especially care of the skin and of the teeth and clothing, is quite inadequate. Glandular tuberculosis is about as widely spread as among the children of the city population. Infection within the dwelling must be considered as the most important factor in the tuberculous infection of children.

No grounds for assuming a hereditary transmission were found. In a not inconsiderable number of children, transmission by flies plays a rôle. The origin of tuberculosis that is so widespread in adults must, for the most part, be referred to tuberculous infection in the home during childhood. The evils complained of ought to be opposed with the greatest energy. Dwellings must be improved and greater care must be taken for the schools to secure rational nutrition and care of the school children. The installation of school physicians in the country is to be generally recommended. The country population should be instructed with reference to the cause and cure of tuberculosis. Tubercle bacilli in the dwellings of tuberculous patients must be rendered harmless and disinfection should be made obligatory and gratuitously provided for all patients suffering with open tuberculosis and regularly after a death from tuberculosis. For disinfection the process of Lockemann and Kroner by means of paraformaldehyd and permanganate is to be recommended. Curable tuberculous patients should, as far as possible, be sent to sanatoria at the beginning of their illness. Healthy children must be removed from homes infected with tuberculosis and placed in others. Isolation of phthisical patients who are disseminating the bacilli is the most important of all measures in the campaign against tuberculosis

The Law Against Quackery

The same favorable testimonial cannot be given the Reichstag for its action in the matter of the law to regulate the unqualified practice of medicine as was given for the action on the vaccination question. The proceedings of the committee in which the bill is at present under discussion show constantly more plainly, as I have already indicated in my former report, that the parties intend to bury the bill in the committee and give it no chance to reach the Reichstag in full session.

Flower Days for German Charity

As in Germany we have no multimillionaires to rely on, the private philanthropy which assists the government in the field of charity is compelled to adopt the most various means and methods to raise the necessary money. The means hitherto employed in the most various forms, such as festival arrangements, bazaars, raffles and the like with which to induce well-to-do citizens to open their purses under more or less friendly compulsion, have exhausted their efficacy according to the general opinion, and therefore a new method has been determined on. This year in the various cities on definite days a number of young girls and children will sell flowers on the streets and in the houses and there is reason to hope from some examples that these flowers will be sold at an unusually high price to the advantage of the cause to which the money is to be devoted. June 24 and 25 in Berlin are to be flower days for mothers and children, the proceeds of which are to go to the institutions for the care of infants and the like. These arrangements will be supplemented by evening lectures, at which instruction on important questions in the field of social hygiene and the care of children will be given free to the public by physicians by means of lectures, moving pictures, etc. Previous to this on June 16 the central committee of the Prussian National Red Cross will hold a cornflower day (*Kornblumentag*) to raise funds to provide spa treatment for needy war veterans and for the building of the Red Cross home for veterans and for similar purposes.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, May 18, 1911.

First Austrian Congress on Tuberculosis

A few days ago, the first Austrian congress on tuberculosis was held in Vienna. At present, in our country there is no public general institution or central board dealing with this question, which has been left entirely to private—and therefore often commercial enterprise. The government, at last aroused to its duty, has called together this congress to organize and centralize the whole subject.

Hitherto, all efforts have been directed to the care of curable patients. Prophylaxis in the sense of making the incurable ones harmless—and these are the most dangerous ones—has been neglected. This congress has impressed on the lay public the importance of secluding the patients in the later stages of phthisis. Thus, there are only 400 beds open in the whole country for advanced tuberculosis patients; and only six tuberculosis sanatoriums are open in Austria, five of which are private commercial concerns. In seven public hospitals there are special tuberculosis wards, but these also try to keep away the hopeless cases; only one surgical pavilion is devoted to that disease, as well as one institute in Vienna. In eight seaside places there are convalescent homes for tuberculous children, and in twenty-one towns and hamlets there are small local committees, which give advice and help in cases of tuberculosis. These are all. Dr. Larisch, who read a paper on this subject, also pointed out that the government has lately turned its attention toward the occurrence of this disease amongst its servants and officers, chiefly in its industries, the prisons and the post-office service. Much more has been done by the workmen's and the merchant clerks' sick clubs (Krankenkassen). The head physician of the first-named institute, Dr. Docent Schiff, who supervises 320,000 wage-earners in Vienna, showed that the occurrence of tuberculosis among members of this Krankenkasse entails an expenditure of 1,250,000 kronen ($300,000) sick pay per annum, or about 20 per cent. of the total sick pay. The number of cases is 11 per cent. of all, while the number of sick days for tuberculosis is 23 per cent. of the total number. The patients of the Krankenkasse are paid full sick pay for twenty-six weeks, half pay for another twenty-six weeks. After one year of continued disease they are discharged! Thus, just those who most need help are left without it. In the merchant clerks' sick club a strict supervision of all suspected cases is organized. At the special hospital owned by the club the diagnosis is reached or attempted by all modern means.

Sixty district doctors are informed from there and each tuberculous patient is put on a list and reported on regularly by the doctor. Attention is paid to the social and other conditions of the patient. This club has also made arrangements to have its members cared for in open-air institutes and is the only club which receives incurable patients in its special ward. In another paper by Dr. Reisinger, the outlines of the proposed general organization were illustrated. The whole country is to be divided into small health districts. In the center of each a local committee, consisting of the district doctor, the head of the administrative board, the vicar and other prominent men, will have the power to supervise patients and their surroundings, to give advice in health matters, to inspect the sanitary conditions of stables and of human dwellings, to control the supply of milk, and to deliver lectures and give demonstrations pertaining to the subject. Two new measures, however, are indispensable if the desired effect is to be obtained: the compulsory notification of tuberculosis—at least to the local committee—and the appointment of "tuberculosis inspectors," equivalent to the existing malaria inspectors and pellagra inspectors. One of the results of the congress may be seen in the fact that the government has already found it suitable to grant a sum of 2,000,000 kronen ($500,000) for the preparatory arrangements of the above scheme.

Demonstrations Against a Severe Examiner

Professor Schauta, the well-known gynecologist and obstetric surgeon, was exposed to unpleasant demonstrations by students a short time ago on the ground that he had been too severe at the examination, having reprimanded more than 30 per cent. of the candidates during the last few months. The professor explained his attitude to the students in general by stating that his conscience did not allow him to accept from his students insufficient knowledge. The most precious good we have, the life of mothers and children, depended on the knowledge of the doctor. He could not believe that any but the very best qualifications were admissible. He concluded by saying that the best demonstration against him was sufficient knowledge. In the senate of the university and among the students generally, Schauta's attitude was approved, for just now when the increase of medical science is so very marked, a lessening of the requirements for passing would mean a deterioration of the quality of the young physicians.

Introductory Lecture by Ortner

Professor Ortner, who has taken over his clinic, has introduced himself to the students by a most lucid lecture entitled "Occult Diseases," in which he explained the correlations of organs generally not thought of. The lecture threw a vivid light on the methods of teaching of the new professor, and it must be stated that the impression was an excellent one. Among the large number of guests present the entire senate of the Vienna University and numerous officials were seen. The university has gained a really first-class man for its teaching duties.

Marriages

ALEXANDER BROWN DANCY, M.D., Jackson, Tenn., to Miss Mary Happel of Trenton, Tenn., a daughter of the late Dr. Thomas J. Happel, June 6.

ROSS EDWIN PRIDGEN, M.D., Oakland, Tex., to Miss Edith Lane Fox of Van Vleck, Tex., at Thomaston, Tex., March 14.

J. OSCAR BROWN, M.D., Big Cabin, Okla., to Miss Corrinne Arnold of Louisville, Ky., at Jeffersonville, Ind., May 21.

MALCOLM SUMNER WOODBURY, M.D., Clifton Springs, N. Y., to Miss Stella Baker of Kansas City, Mo., June 7.

CLARENCE LEON FESSENDEN, M.D., Sioux Falls, S. Dak., to Miss Ethel Millen of Syracuse, N. Y., June 6.

MARTIN HAGEN, M.D., Soldier's Grove, Wis., to Miss Edna May Johnson of Cashton, Wis., May 30.

JOHN L. LAIRD, M.D., Philadelphia, to Mrs. Gertrude Sturtevant of Wilkes-Barre, Pa., May 20.

FRANK LAWRENCE BAKER, M.D., Weston, Neb., to Miss Frances Jaffe of Lincoln, Neb., May 21.

J. FRANK DENNIS, M.D., Waterloo, Ia., to Miss Hilda A. Tracy of Spickard, Mo., May 2.

WALTER HAROLD SCHEEL, Utica, N. Y., to Miss Gladys M. Head of Chicago, May 23.

Deaths

Isaiah F. Everhart, M.D. University of Pennsylvania, Philadelphia, 1863; a member of the Medical Society of the State of Pennsylvania; philanthropist and naturalist of Scranton; who endowed the Everhart Museum of Natural History in Scranton; a medical cadet and later assistant surgeon of the Eighth Pennsylvania Volunteer Cavalry, and surgeon of the Sixteenth Pennsylvania Volunteer Cavalry during the Civil War; surgeon of the Ninth Pennsylvania State Guards during the strike of 1871; for seven years a member of the medical staff of the Lackawanna Hospital; died at his home in Scranton, May 26, from cerebral hemorrhage, aged 71. A bronze statute of Dr. Everhart, presented to Scranton by Dr. B. Harry Warren, West Chester, is to be dedicated this month.

Francis Marion Prince, M.D. Jefferson Medical College, 1849; one of the oldest and most esteemed practitioners of Jefferson County, Ala., and a resident of Jonesboro and later of Bessemer; died at the home of his daughter in Glen Iris, Birmingham, May 17, from cerebral hemorrhage, aged 83. Dr. Prince was a member and once vice-president of the Medical Association of the State of Alabama; a charter member of the Southern Surgical and Gynecological Society; a member of the Tri-State Medical Association of Alabama, Georgia and Tennessee; for several years president of the Jefferson County Medical Society, and first president of the Bessemer Medical Society. He served throughout the Civil War as surgeon and medical inspector in the Confederate service.

Augustine S. Mason, M.D. Medical College of Virginia, Richmond, 1855; a member of the American Medical Association; surgeon in the Confederate service and chief surgeon of the military department of Richmond throughout the Civil War; for nearly fifty years a practitioner of Hagerstown, Md.; died at his home, May 26, from arteriosclerosis, aged 77. Washington County Medical Society, at a special meeting, adopted resolutions setting forth the brilliant qualities of Dr. Mason and deploring his death.

Benton M. Hall, M.D. Tulane University, New Orleans, 1900; a member of the Medical Association of the State of Alabama; a hospital steward during the Spanish American War; formerly a practitioner of Texas and Colorado, where he was obliged to go on account of his health; died at his home in Huntsville, Ala., May 16, from tuberculosis, aged 35.

Mark D. Ethridge, Memphis (Tenn.) Hospital Medical College, 1902; a member of the American Medical Association, and for several years a practitioner of Sandersville, Miss.; who lived for a time in Silver City, N. M., where he was obliged to go on account of his health; died in Meridian, Miss., May 14, from tuberculosis, aged 32.

Robert Lee O'Brien, M.D. Baltimore University, 1904; a member of the American Medical Association; secretary of the Eastern Colorado Medical Association and local surgeon of the Burlington System at Akron, Colo.; was found crushed to death under his automobile near that place, May 30, aged 34.

Edward Arthur Dakin, M.D. Hahnemann Medical College, Philadelphia, 1881; of Boston and Magnolia, Mass.; a member of the Boston Gynecological and Surgical Society; died in the Addison Gilbert Hospital, Gloucester, Mass., May 22, from septicemia, due to an abrasion of the instep, aged 58.

Augustus Greely Eliot, M.D. College of Physicians and Surgeons, New York City, 1843; a former practitioner of New York City; one of the founders of the New York Academy of Medicine, visiting physician to New York and Bellevue Hospitals, died in Rostock, Germany, May 10, aged 90.

John B. Cook, M.D. University of Southern California, Los Angeles, 1890; a member of the medical staff of the California Hospital, Los Angeles; for five years physician to the State Reform School, Whittier; died at his home in Los Angeles, May 20, from cerebral hemorrhage, aged 43.

Bertha Hastings Campbell, M.D. Woman's Medical College of Pennsylvania, Philadelphia, 1891; of Anadarko, Okla.; a member of the Oklahoma State Medical Association and a pioneer practitioner of Logan County; died in the El Reno Sanitarium, May 12, aged 46.

Cyrus C. Paxson (license, Kansas, 1901); for twenty years a practitioner of Bolton, Kan., and for the last six years a resident of Independence; died in the Montgomery County Hospital, May 18, from cerebral hemorrhage, following a fracture of the hip, aged 74.

XUM

Joseph T. Pindell, M.D. University of Maryland, Baltimore, 1865; a medical cadet in 1864 and then for two years surgeon in the army; at one time a member of the council and mayor of Wellsville, Kan.; died at his home in that city, May 22, from nephritis, aged 81.

John H. Dennard, M.D. Atlanta (Ga.) Medical College, 1893; a member of the Medical Association of Georgia and at one time mayor of East Point; local surgeon of the Seaboard Air Line; died at his home in East Point, May 21, from hemorrhage, aged 38.

John H. Whitenack, M.D. Medical College of Indiana, Indianapolis, 1874; superintendent of the pharmaceutical department of a wholesale drug house of Indianapolis; was stricken with apoplexy, May 23, and died in an ambulance while being taken to his home.

Andrew Guffin Cooper, M.D. Indiana University School of Medicine, Indianapolis; of Scireleville, Ind., intern in the Indianapolis City Hospital; aged 29; was almost instantly killed in a collision between the hospital ambulance and a street car, May 14.

John D. McGirk, M.D. University of Pennsylvania, Philadelphia, 1871; founder of McGirk's Sanitarium at Philipsburg, Pa., and a member of the borough council from 1865 to 1868; died at his home in Philipsburg, May 25, from senile debility, aged 76.

Clarissa Van Yeomans, M.D. Hahnemann Medical College, Chicago, 1870; for more than twenty years a practitioner of Clinton, Ia.; died at the home of her daughter in Grand Crossing, Chicago, May 6, from senile debility, aged 89.

Dalton Stewart McCarthy, M.D. Trinity Medical College, Toronto, 1893; of Hemet, Cal.; a member of the American Medical Association; died at the home of his parents in Orangeville, Ont., May 14, from nephritis, aged 41.

Robert Atkinson, M.D. University of Maryland, Baltimore, 1854; founder and for thirty years president of the Atkinson Private School for Boys, Baltimore; died at his home in Baltimore, May 21, from pneumonia, aged 79.

Peter Follman, M.D. Ecole de Médecine, Paris, France, 1860; a practitioner of the United States since 1863, and a resident of Mankato, Minn., since 1869; died at his home in that city, May 17, from cerebral hemorrhage, aged 84.

Elbert C. Macy, M.D. Hahnemann Medical College, Chicago, 1885; a veteran of the Civil War; for forty-five years a practitioner of Pleasanton, Ia.; died recently at his home, and was buried, May 13, aged 66.

Alpheus Prince, M.D. University of Buffalo, N. Y., 1883; a member of the pension examining board of Byron, N. Y.; died at the home of his son in Ithaca, N. Y., May 18, from nephritis, aged 55.

John Francis Baker, M.D. Long Island College Hospital, Brooklyn, N. Y., 1890; of New Haven, Conn.; died at St. Raphael's Hospital in that city, May 21, after a surgical operation, aged 50.

Albert Hamilton Hayes (license, Massachusetts, years of practice, 1894); of Boston; was overcome by heat in a subway station in Boston, May 22, and died a few moments later, aged 71.

Pierre M. Fourguette, M.D. Faculté de Médecine, Paris, France, 1882; for several years physician of the French Society of New Orleans; died at his home in that city, May 21, aged 53.

William Burgess Brengle, M.D. Rush Medical College, 1879; a member of the Oklahoma State Medical Association; physician of Noble County; died at his home in Perry, May 18, aged 58.

William Robert Anthony Wilson, M.D. College of Physicians and Surgeons, New York City, 1895; formerly of Peoria, Ill.; died at his home in Pittsfield, Mass., May 13, aged 41.

William Protzman, M.D. Cincinnati College of Medicine and Surgery, 1882; one of the oldest practitioners of Lincoln, Neb.; died at his home, May 23, from senile debility, aged 82.

William McKee Eldon, M.D. Jefferson Medical College, 1888; formerly a member of the American Medical Association; died at his home in Roaring Spring, Pa., May 18, aged 51.

G. E. Milton Smith, M.D. University of Maryland, Baltimore, 1888; of Baltimore; died at the Church Home and Infirmary in that city, May 22, aged 43.

John Bugbee Hartwell, M.D. Albany (N. Y.) Medical College, 1856; died at his home in Lockport, N. Y., May 2, from arteriosclerosis, aged 82.

George P. Shoemaker, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1882; died at his home in Hendley, Neb., May 4, aged 58.

Charles Henry Hamilton, M.D. Rush Medical College, 1873; died at his home in Dubuque, Ia., May 28, from erysipelas, aged 68.

Daniel H. Whitford, M.D. Bennett Medical College, Chicago, 1878; died at his home in Elgin, May 17, aged 58.

William H. Pickford, M.D. Jefferson Medical College, 1881; died at his home in Philadelphia, May 15.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

[CONTRIBUTION FROM THE CHEMICAL LABORATORY OF THE AMERICAN MEDICAL ASSOCIATION]

PIX CRESOL

W. A. Puckner and W. S. Hilpert

In a paper on "The Abuse of Chemical Formulas"[1] several examples were given of the various methods employed by "patent medicine" concerns to give standing to their products by assigning to them a chemical formula. In some cases the formulas given are impossible, in other cases they may represent the chemical composition of only one constituent or it may be an attempt at both. To a chemist such formulas are absurd and on seeing a formula which he knows to be wrong he naturally thinks "Fake," "Ignorance," or both. Just such a formula ($C_5H_6N.SO$) applied to a product called Pix Cresol, manufactured by the "Pix Cresol Chemical Co., Kansas City, Mo.," attracted our attention. No mention of such a formula can be found in such works as Richter's most complete Index of Carbon Compounds, nor the three supplemental volumes published, 1901-1905, by the German Chemical Society and Beilstein's Organic Chemistry (3rd Edit.). This fact, supplemented by inquiries from correspondents as to the composition of the substance made it seem worth while to make a chemical examination of it.

The examination was made and showed that the essential constituent was oxyquinolin sulphate. As potassium sulphate was also found it was concluded that Pix Cresol was a preparation containing a mixture of oxyquinolin sulphate and potassium sulphate, which has also been known in the past under the proprietary name, "Chinosol." At this time a letter was referred to the laboratory containing the report of an analysis of Pix Cresol, which showed the presence of oxyquinolin sulphate but no potassium sulphate. As this indicated that Pix Cresol contained as its essential constituent the substance now sold as Chinosol, the laboratory purchased a new specimen of Pix Cresol from the Chicago representatives of the Pix Cresol Co. The examination[2] of this specimen showed that it consisted of approximately 21 per cent. oxyquinolin sulphate, about 8.3 per cent. potassium sulphate and the remainder almost entirely milk sugar.

It is evident, then, that both the specimen of Pix Cresol obtained directly from the manufacturers and also the one purchased more recently from the Chicago agent, contain as an essential constituent Chinosol of the composition sold formerly. The substance now sold under the name Chinosol and described in New and Nonofficial Remedies is pure oxyquinolin sulphate, and as the exploiters of Pix Cresol probably obtain their supply of oxyquinolin sulphate from the Chinosol Company, the sole American agents for Chinosol, it is to be

1. Puckner, W. A.: Report of the Chemical Laboratory of the American Medical Association, iii, 7.

2. The analytical details will be published in the annual report of the laboratory.

expected that Pix Cresol should change in composition. It is probable that the analysis referred to the laboratory deals with a more recent specimen than the two examined in the Association laboratory.

EDITORIAL NOTE: In view of the Council on Pharmacy and Chemistry's findings,[3] viz., that chinosol is a powerful antiseptic but a feeble germicide and considering that Pix Cresol contains but 21 per cent. oxyquinolin sulphate, the absurdity of the following claims made for Pix Cresol require no further comment:

"Pix Cresol is an Absolutely Sure and Yet Perfectly Safe, Never Failing Destroyer of Pus (*Staph. Pyogenes Aureus.*)"

"It is germicidal, bactericidal, bacillicidal. It is certain as a microorganism destroyer. It destroys absolutely."

"Ridding the blood of germs, it aids in rendering it replete with oxygen———."

"It kills the germs."

"No organism that is causative of morbid processes can withstand it."

"It destroys microorganisms of all kinds. It destroys them absolutely."

"The germ's tenacity of life does not avail against its action as germicide."

"It destroys the spores and toxins utterly."

A further estimate of the pseudo-chemical company, bearing the name of this "strongest, safest, least expensive medical antiseptic, disinfectant and deodorizer known" may be gained by a cursory glance at some of its "specialties":

"Maizinin compound, Positive Chill and Malaria Specific" the firm says, "prepares the parasites for execution by the leukocytes." It is said to contain arsenic, while the name implies the presence of some plant drug.

"Psora, the Syphilis Specific," is a shot-gun mixture said to be "the scientific combination of the soluble Triple Iodids with the active principles of Echinacea, Cascara amagra, Berberis aquif., and Phytolacca rad.," and is claimed to make "the syphilitic lesions disappear and fail to return."

"Rectoids—Cones for the treatment of all rectal trouble," are said to be "a combination of Rectin (Pix) compounded from Buckeye, Collinsonia, Hamamelis, Belladona, Pix Cresol."

"Tablets for the Female—Pix Cresol Uterettes," it is said, "for sanitary purposes may be continued forever . . . "

When one realizes that this sort of pseudo-scientific twaddle is accepted by many physicians at its face value, the outlook for therapeutics seems dark, indeed. So long as the existence of such concerns is tolerated by the medical profession, so long will there be a crying need for a "Propaganda for Reform in Proprietary Medicines."

Correspondence

Long Beach and the Los Angeles Session

To the Editor:—I was sorry not to see more in the Los Angeles Number of THE JOURNAL about Long Beach, the largest (17,500 people) and most popular beach suburb of the convention city. The trolley service between here and the city is a twenty-minute one and the journey, 22 miles, is covered in forty-five minutes. It is a city of easterners almost entirely, nearly every state being represented. We have good schools, including a $150,000.00 polytechnic high school.

While we have a "Pike," and an 1,800-foot pier stretching out into the ocean, large hotels and apartments, amply able to accommodate enormous crowds, we have one distinction (our greatest asset, and that for which we are best known as a pleasant place for a man to send his family); we have no saloons.

Many physicians will be glad to know that they can bring their families to such a place and be with them at night without missing a single session and, further, that the family will be in good surroundings and on the beach for their recreation time instead of in the crowded city.

We have Dr. Evans in our auditorium (seating 6,000, and on the pier), on June 23, on the subject of "The Great White Plague."

THOMAS L. ROGERS, Long Beach, Cal.
Secretary-Treasurer, Long Beach Medical Society.

3. Council on Pharmacy and Chemistry Reports, 1910, p. 47.

Pilocarpin in Pruritus

To the Editor:—In your article on pruritus in THE JOURNAL (April 8, 1911, p. 1034), you omitted reference to the internal use of pilocarpin in pruritus. It will be found of exceptional value in the pruritus so often accompanying influenza, the pruritus of jaundice and pruritus vulvæ. Atropin combined with pilocarpin checks the sweating and salivation, which otherwise are liable to occur.

Dose:

Pilocarpin .....gr. 1/4
Atropin .....gr. 1/100

Give only when the pruritus commences.

JOHN J. REID, M.D., New York.

The Physician's Opportunities in the Foreign Field

To the Editor:—In recent copies of THE JOURNAL I noticed something in regard to medical missions. A beautiful picture in the life of our Lord Jesus Christ while on earth is given by Luke the beloved physician in the fourth chapter of the Gospel according to Luke, verses 33 to 44 inclusive. I quote from it:

"And Simon's wife's mother was taken with a great fever; and they besought Him for her. And He stood over her, and rebuked the fever; and it left her; and immediately she arose and ministered unto them. Now when the sun was setting, all they that had any sick with divers diseases brought them unto Him, and He laid his hands on every one of them, and healed them.

"And devils also came out of many . . . And the people sought . . . that He should not depart from them. And He said unto them, I must preach the Kingdom of God to other cities also; for therefore am I sent. . . . "

China, Arabia, Burmah, Laos, India, China, the great unoccupied fields of central Asia, Mongolia, Afghanistan, Turkestan, Manchuria, the Philippines and many other islands of the sea, are all crying out to-day for the ministry of healing, and offer to the Christian physician a glorious field of service. Men like Livingston, Parker and Morrison have given luster to the medical profession.

The mission boards are calling for medical men now, some for my field, Korea. The first resident Protestant missionary to Korea was Dr. Horace M. Allen, who by ministering to the severely wounded prince in the early days, received the royal favor of the emperor of Korea, whose favorable attitude toward missionaries and mission work did much to open that land to the gospel. The needs of the people in these lands for intelligent medical service is indescribably great. They gladly avail themselves of the physician's ministry. Medical supplies, instruments, the dispensary and eventually a hospital are usually supplied the physician by the board he represents. Sometimes these hospitals are the gifts of the people on the field in appreciation of the doctor's services as in the case of Dr. Allen's fine hospital in Madras, India.

Diseases met in these lands cover a wide field; diseases of the eyes, skin diseases of children, difficult obstetric cases (the normal cases usually being seen by midwives), a wide field of surgicel cases, tuberculosis, and the diseases peculiar to those lands, leprosy, beriberi and many others, offer a field for special investigation and study for those who so desire. Above it all there is a terrible heart-rending cry of suffering going up from these non-Christian lands which should reach

the heart of the Christian physician and cause him prayerfully to consider his own relation to this call and the willingness to meet it, remembering the words of our Lord Jesus Christ, the great physician: "Inasmuch as ye have done it unto one of the least of these my brethren ye have done it unto Me."

In addition to the actual work of the medical missionary there is a great field for medical teaching. The object of the medical mission work is primarily to win the people to Jesus Christ using healing as a means to this end and in answer to our Saviour's command: "Go ye into all the world and preach the gospel to every creature."

In our own field in southern Korea there is a call now for two medical missionaries. Information as to this call may be obtained by writing to Dr. S. H. CHESTER, Secretary Executive Committee on Foreign Missions, Southern Presbyterian Church, First National Bank Building, Nashville Tenn.

To those who are interested in further information concerning medical missions, most helpful and interesting information may be obtained from the following sources:

Medical Missions, by Wanless, price 25 cents.
Murdered Millions, by Dowkont, price 15 cents.
The Supreme Decision, by George Sherwood Eddy, price 10 cents.
The Work of the Medical Missionary, price 15 cents.

These and others can be obtained from Mr. W. B. SMITH, Candidate Secretary, Student Volunteer Movement, 125 East Twenty-Seventh Street, New York City.

W. H. FORSYTHE, M.D., Mokpo, Korea.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

SPOROTRICHOSIS

To the Editor:—I have recently noticed articles in THE JOURNAL on sporotrichosis. I can find nothing in the text-books on the disease and am anxious to know where I can find something on the subject, fully setting forth just what it means.

S. C. BROADSTREET, Mt. Pleasant, Texas.

ANSWER:—Sporotrichosis is described in recent books on skin diseases (Stelwagon, Hyde, Pusey, etc.). In his paper "A Case of Sporotrichosis in Man" (THE JOURNAL, May 6, 1911, p. 1312), Dr. H. J. Harker gives a bibliography which includes the principal contributions on this subject in English literature. Reference may also be made to the article by Dr. R. L. Sutton ("Sporotrichosis," THE JOURNAL, Sept. 17, 1910, p. 1000) which gives a rather full bibliography.

BACTERICIDAL EFFECTS OF ALCOHOL AND CHLOROFORM

To the Editor:—1. How long will it take 94 per cent. commercial alcohol to kill the ordinary pus-producers?

2. Which will kill a germ most quickly, 60 per cent. or 94 per cent. alcohol? (a) on the skin and (b) in glass bottles.

3. How long will it take an anesthetic, such as ether or chloroform, to kill pus-producers?

L. T. S. HOTTENDORF, M.D., Randolph, Utah.

ANSWER.—1. Several hours. Ten per cent. alcohol restrains the growth of bacteria, but an alcohol of nearly absolute strength is required to *kill* bacteria, and even this is not efficient against spores.

2. The stronger alcohol is more efficient, both on the skin and in glass bottles.

3. We find no statement with regard to the bactericidal activity of ether. Chloroform is active in 1 per cent. solution. A considerable period of contact would be required.

RED CLOTHING AND ACTINIC RAYS

To the Editor:—With great interest I read your editorial on "The Use of Orange-Red Underclothing in the Tropics" in your issue of May 20. This editorial contains the following sentence: "Orange-red underclothing and hat-linings were chosen on account of the known resistance of this color to the actinic rays of the sun." Can you tell me where I can find some scientific data regarding this fact?

E. E. BLAAUW, Buffalo, N. Y.

ANSWER.—The use of red underclothing and hat-linings is simply an adaptation of the well-known principles governing the proper construction of a "dark room" for the development of negatives. The "Century Dictionary" says that such a room is one "from which all actinic rays have been excluded. . . . This dark room is not without light, but its light is of a quality which in no way affects the plate." As red objects owe their color to the fact that they transmit only that part of the light whose combined effect on the eye is red, it follows that the ultraviolet or actinic rays, which lie at the other end of the spectrum, will not easily pass through the orange-red material. For a full discussion of the principles of light and heat absorption and radiation see "Elementary Treatise on Physics," by Ganot, translated from the French by E. Atkinson. Wm. Wood & Co., New York, 1906. For further elaboration and application of these physical laws to the point in question see "Effects of Tropical Light on White Men," by Major Charles E. Woodruff, U. S. Army, Rebman Publishing Co., New York, 1905.

The Public Service

Medical Department, U. S. Army

Changes for the week ended June 3, 1911.

Wolfe, Edwin P., major, granted one month's leave of absence, to take effect about July 1, 1911.

Wolven, F. Homer, D.S., reported for temporary duty at Fort William H. Seward, Alaska.

Lowe, Thomas S., M.R.C., left from temporary duty at Fort Apache en route to Douglas, Ariz., for field duty.

Clark, John A., captain, leave of absence extended twenty days.

Carter, Charles S., C.S., reported for duty at Fort Morgan, Ala.

Kunckel, George I., D.S., ordered to temporary duty at several posts in the Department of the Gulf.

Phillips, Hiram A., lieut., reported on ten days' leave of absence.

Lynch, Charles, major, ordered to Boston on special business pertaining to the American Red Cross.

Ballard, James C., M.R.C., reported for temporary duty at Fort Miley, Cal.

Wales, Philip G., major, ordered to Washington, D. C., for examination for promotion.

Ashford, Mahlon, lieut., granted leave of absence for two months with permission to apply for extension of one month.

Kinard, Kerwin W., M.R.C., recently appointed, ordered to active duty and assigned to station at Fort Ethan Allen, Vt.

Hughes, Leonard S., 1st-lieut., relieved from duty with maneuver division and ordered to Fort Clark, Texas, for duty.

Boyer, Perry L., captain, relieved from duty at Fort Clark, Texas, and ordered to Chicago, Ill., for duty as attending surgeon, headquarters, Department of the Lakes.

Hall, James F., captain, relieved from duty as attending surgeon, headquarters, Department of the Lakes, Chicago, and ordered to Fort Strong, Mass., for duty.

Lombard, Marion S., M.R.C., recently appointed, ordered to active duty and assigned to duty with troops at target range, Ashland, Neb.; on completion of this duty assigned to him will stand relieved from active duty in M. R. C.

Heflebower, R. C., lieut., left Fort Bayard, N. M., on twenty days' leave.

Hoff, John Van R., colonel, ordered to make inspection of medical departments at several posts in the Department of the East.

Medical Corps, U. S. Navy

Changes during the week ended June 3, 1911:

Berryhill, T. A., medical inspector, detached from the marine recruiting station, New York, and ordered to the naval medical supply depot, Brooklyn.

Brownell, C. D., surgeon, detached from the naval hospital, Las Animas, Colo., and ordered to the Naval Medical School Hospital, Washington, D. C., for treatment.

Stepp, J., surgeon, ordered to the *Missouri*.

Moran, C. L., P. A. surgeon, commissioned passed assistant surgeon from Feb. 10, 1911.

Hough, F. P. W., and Rhoades, G. C., P. A. surgeons, commissioned passed assistant surgeons from April 11, 1911.

Smith, W. B., P. A. surgeon, detached from the naval hospital, Annapolis, Md., and ordered to the Naval Academy.

Hayden, R., P. A. surgeon, detached from the Naval Medical School Hospital, Washington, D. C., and ordered to the Naval Academy.

Smith, C. W., asst.-surgeon, detached from the *Dubuque* and ordered to the *Nashville*.

Mackenzie, E. G., P. A. surgeon, commissioned passed assistant surgeon from Dec. 28, 1910.

Woodland, E. E., and Ledbetter, P. B., asst.-surgeons, commissioned assistant surgeons from May 4, 1911.

Malkin, G. M., acting asst.-surgeon, ordered to the navy recruiting station, Baltimore.

U. S. Public Health and Marine-Hospital Service

Changes for the seven days ended May 31, 1911.

Lumsden, L. L., P. A. surgeon, granted fifteen days' leave of absence from May 29, 1911.

Bahrenburg, L. P. H., P. A. surgeon, granted one month's leave of absence from June 1, 1911.

Edwards, George P., A. A. surgeon, granted thirty days' leave of absence from June 1, 1911.

Naulty, C. W., Jr., A. A. surgeon, granted eighteen days' leave of absence from May 31, 1911.

Thompson, W. R. P., A. A. surgeon, granted ten days' leave of absence from May 24, 1911.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF POST-GRADUATE WORK, CONTRACT PRACTICE, LEGISLATION, MEDICAL DEFENSE, AND OTHER MEDICOLEGAL AND ECONOMIC QUESTIONS OF INTEREST TO PHYSICIANS

THE LEAGUE FOR MEDICAL FREEDOM

Collier's Weekly, June 3, prints the following editorial under the caption: "Liberty":

Protests from readers have greeted our criticism of the League for Medical Freedom. Also a protest is telegraphed from the California branch of the league. In the minds of most of those who protest, the principal objections are to the following positions taken by us: 1. That the league contains the kind of men who opposed the pure food act. 2. That the activities of the league are against public welfare and frequently surreptitious. Our answer follows:

1. B. O. FLOWER, one of the nine founders of the league, and now in his second term as president of it, was PRESIDENT OF "THE R. C. FLOWER MEDICINE COMPANY" from 1885 to 1899. R. C. FLOWER is the notorious quack and general humbug whose latest arrest was as late as 1908. B. O. FLOWER wrote the league's pamphlets on "Bubonic Plague" and "The Compulsory Medical Inspection of School Children." His views on patent medicine are often expressed. For instance:

> I believe that a great majority of the proprietary medicines are infinitely less dangerous to the public than the majority of regular doctors' prescriptions.

2. C. W. MILLER, second vice-president of the league, was also one of the founders. In his newspaper, which publishes patent medicine advertising, he has constantly fought the medical profession. Last year one of his addresses against what he calls a "doctors' trust" was delivered to the Dairy Association in Baltimore. We may say in passing that *Collier's* does not believe in freedom to sell tuberculous milk any more than it does in freedom to sell tuberculous meat.

3. MRS. DIANA BELAIS, a director and also a founder, has appeared before in this paper as president of an anti-experiment society, a well-meaning, ignorant, reckless, and muddle-headed agitator. We are officially informed by the chairman of the "committee on publicity and education" of the league that Mrs. BELAIS was made a director "because of her courageous efforts to secure a higher law in New York State than the doctors' cruel theories and professional arrogance." Here's to anti-experiment, meningitis, diphtheria, and freedom!

4. DR. C. S. CARR, who is on the advisory board, edits a pseudomedical sheet. *Collier's* long ago printed a letter signed "The Peruna Drug Company, per CARR." As editor of "Medical Talk for the Home," he carried advertisements of many of the medicines exposed in *Collier's* in our series on "The Great American Fraud." He is now editor of the *Columbus Medical Journal*, which he at once turned from an ethical sheet into a sheer fraud. Look at the issue of May, 1909. On the front cover is a picture of CARR himself writing: "All drugs are poison. All druggists are poisoners." On the reverse side is an advertisement beginning: "Prescribe Antikamnia and Codein tablets in la grippe, headaches, etc." Hurrah for freedom and Peruna!

5. GEORGE P. ENGLEHARD, who is on the advisory board, has for a long time in his journals [*Medical Standard* and *Western Druggist*] defended the patent-medicine interests.

6. CHARLES HUHN, also a member of the board, is a prominent officer in a cooperative patent-medicine concern.

7. Another founder was a member of the advertising agency which is now spending for the league the money which it puts into its advertising campaigns.

The league says it did not oppose any "sanitary or quarantine laws." This statement requires some hardihood, as the hearings of the Senate Committee on Health, and more especially of the House Committee on Foreign and Interstate Commerce, show. It would interest us to know whether the league can point out a single health bill introduced in Congress which it has not opposed. When the leaders wish to oppose a sanitary or quarantine law they do it on the ground that such a law would *indirectly* "lead to compulsory and discriminatory legislation."

The league was nominally born recently, but those who make it up had already as individuals, and even as organizations (such as the Colorado League for Medical Liberty) opposed State and National legislation. A pamphlet published by the Colorado branch singles out *Collier's* for attack, and was written by a notorious quack doctor. In California, which was the special theme of our former editorial, if the league should prevail, the next threat of bubonic plague would be carried out, instead of being suppressed like the last; small-pox might again become a serious epidemic; school children would bear their ills as best they might. A bill was introduced ordering that the Board of Health be composed of two "allopaths" (a school which does not exist but is a hostile term for regular physicians), two homeopaths, two "eclectics," two osteopaths. It did not pass!

Some leading homeopathists and osteopathists, be it said, are in favor of a national health bureau and strongly against the agitations of the league. DR. FRANCIS B. KELLOGG, president of the California State Homeopathic Society, in an address recently said: . . . "In my opinion there is an effort being made to exploit the homeopathic profession by influences and interests which are indirectly but radically opposed to the welfare not only of practitioners of medicine in general, but to that of humanity itself. I refer to the effort to enlist homeopathic support for the so-called National League for Medical Freedom."

PLATO complained that in his day doctors made too sharp a distinction between the body and the mind. In our day the best class of physicians frequently recommend faith cure and Christian Science, and the Emmanuel movement is an indication that it is possible for science and religion to work together in healing. Few mere observers rate the benefits that Christian Science has brought to the community more highly than we do. A belief which so frequently brings about an actual improvement in character, disposition, bodily health, and mental atmosphere, deserves the most serious recognition, even by those who regret its hostility to the progressive science of medicine. It is possible at times, for clever designers to use members of any faith for disastrous purposes. When R. C. FLOWER was at the height of his career, in 1907, as manufacturer of diamonds, vender of fake mining stock, wearer of most ingenious disguises, traveler under assumed names, and general artist in gold bricks, he conceived the idea of playing for profit upon the earnest beliefs of the followers of MRS. EDDY. One of his accomplices, a woman, who also used an assumed name, worked the game with him, and when Dr. FLOWER, alias Mr. CORTLAND, took up the cudgels in defense of Christian Science, without being requested to do so, he said:

> Not that I am one of its disciples, but I like to see every one FREE TO PRACTICE MEDICINE AS HE WISHES.

Here we have the very words themselves from old Doc FLOWER. Up with freedom!

Everybody who believes in "freedom" in medicine is within his natural and political rights in supporting this league. *Collier's*, not believing in this species of "freedom," is also within its rights in treating the league as a menace, the make-up, bias, and purpose of which ought to be fully understood.

THE TUBERCULOSIS BILL IN COLORADO

The Denver (Colo.) *News* for May 18 says, regarding the bill passed by the legislature requiring the registration of patients suffering from tuberculosis:

The bill for the registration of tuberculosis is a bill to recognize facts, and deal with them as facts. It is a fact that tuberculosis is an infectious disease. It is a fact that every case of tuberculosis is caught, directly or indirectly, from some other case. It is a fact that the careless consumptive is a source of serious danger to the community. It is a fact that this danger to the community can be almost absolutely abolished by attention to a few simple rules of conduct; rules which make for the patient's comfort as well as for the community's health.

The bill recognizes these facts. The bill seeks to safeguard the public health from the greatest and deadliest disease in the world. . .

The opponents of the bill act as if it were a new thing in American legislation, and predict all manner of dire results which will flow from it, if it becomes a law. As a matter of fact, the bill is not new. . . . [It] is practically identical with the laws now in force in eighteen states; and some of these the most progressive states. California, Connecticut, Iowa, Illinois, Kansas, Maine, Massachusetts, Michigan, Minnesota, Missouri, New York, New Jersey, New Hampshire, Pennsylvania, Rhode Island, Vermont, Washington and Wisconsin have this law now. So has the District of Columbia. All told, 49,784,000 persons, or 54 per cent. of the entire population of our country, are living now under this law—and finding no inconvenience from it whatsoever. Talk about

the oppression the law will cause is idle in face of the fact that a majority of the American people have already tested the law, and found no oppression in it.

And wherever it has been in force for any considerable time, tuberculosis is beginning to retreat.

The liberty to transmit a wasting and destructive plague is hardly one of the sacred and inalienable rights of mankind.

MEDICAL LEGISLATION IN ILLINOIS

Since proposed medical legislation was reviewed in this department of THE JOURNAL, May 13, the Illinois State Legislature has adjourned, after passing the following bills:

S. B. 174, to create a sanitary inspection board to be appointed by the state food commissioner, to regulate sanitary conditions of creameries and food factories.

S. B. 235, to enable the State Board of Health to issue temporary licenses to senior students in colleges having a course extending over five years.

S. B. 263, to appropriate $20,000 per year to the State Water Survey for the purpose of investigating the public water-supply.

S. B. 264, to increase the number of state factory inspectors, and to provide for an additional physician on occupational diseases.

S. B. 422, to abolish the common drinking cup.

S. B. 475, to prevent goods, wares and merchandise delivered to any house in which contagious disease exists from being returned at any time to the seller of such goods, wares and merchandise.

H. B. 53, to provide compensation for municipal officers who furnish burial permits on certificates of death.

H. B. 55, to prohibit city councils from enforcing the tuberculin test on dairy herds.

H. B. 140, to provide for the equipment of a state surgical institution for children under 14 years of age.

H. B. 250, to provide for the protection of the public health by minimizing the causes of occupational diseases.

H. B. 434, to allow counties to erect and operate branch county hospitals.

H. B. 460-61, to empower the Chicago Board of Education to establish and maintain schools for deaf, dumb, crippled, blind, subnormal, dependent and delinquent children.

H. B. 642, to make an appropriation of $60,000 per year for the equipment, maintenance and extension of the College of Medicine of the University of Illinois.

The bill to establish a state sanatorium for consumptives failed to become a law; although a bill passed the senate carrying an appropriation of $100,000, and one passed the house, with an appropriation of $25,000.

H. B. 493, to provide for adequate registration of births and deaths, died in the house. Three attempts were made to pass this bill without success. Further consideration was postponed to a later day.

H. B. 608, which authorizes boards of education to appoint one or more school nurses "to have general oversight and supervision of the health of pupils in the public schools, to visit the public schools for the purpose of examining into the condition of health of pupils and to consult with teachers and parents regarding means of improving the health of pupils and the sanitary conditions of the public schools and to make recommendations to the board of education or the board of school directors concerning the result of such investigations," passed both houses but Governor Deneen has been asked by the State Board of Health to veto it.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

DELAWARE: State Society and Homeopathic, Dover and Wilmington, June 20. Secretary of the Medical Council, Dr. H. W. Briggs, Wilmington.

ILLINOIS: Coliseum Annex, Chicago, June 13-15. Sec., Dr. James A. Egan, Springfield.

KANSAS: Hotel Grund, Kansas City, June 13. Sec., Dr. H. A. Dykes, Lebanon.

MARYLAND: 1211 Cathedral St., Baltimore, June 20. Sec., Dr. J. McPherson Scott, Hagerstown.

MICHIGAN: University Bldg., Ann Arbor, June 13. Sec., Dr. B. D. Harison, 504 Washington Arcade, Detroit.

MINNESOTA: State University, Minneapolis, June 20. Sec., Dr. W. S. Fullerton, 214 American National Bank Bldg., St. Paul.

MISSOURI: Gymnasium of St. Louis University, St. Louis, June 12-14. Sec., Dr. Frank B. Hiller, State House, Jefferson City.

NEW JERSEY: Capitol Bldg., Trenton, June 20-21. Sec., Dr. H. G. Norton.

NEW YORK: June 27-30. Mr. Harlan H. Horner, Chief of Examinations Division, Department of Education, Albany.

NORTH CAROLINA: Charlotte, June 14. Sec., Dr. Benjamin K. Hays, Oxford.

PENNSYLVANIA: Regular, Homeopathic and Eclectic, Philadelphia and Pittsburg, June 27-30. Secretary of the Medical Council, Mr. Nathan C. Schaeffer, Harrisburg.

SOUTH CAROLINA: State House, Columbia, June 13. Sec., Dr. A. Earle Boozer.

TEXAS: Austin, June 27-29. Sec., Dr. J. D. Mitchell, Fort Worth.

VIRGINIA: Richmond, June 20-23. Sec., Dr. R. S. Martin, Stuart.

Medical College Voluntarily Closed

The following letter has been received from Dr. J. M. Frankenburger, dean of the University Medical College of Kansas City: "At the last meeting of the Board of Trustees of the University Medical College, the following resolution was adopted. We dislike very much to close our doors but think it best to do so at this time, while we are in good standing in every respect." The following is the resolution:

"The University Medical College, during the thirty years of its existence has endeavored to teach medicine according to the most approved methods and has always kept in the forefront of all advances therein. It has therefore been favored to a remarkable degree with the confidence of the medical profession, and points with much pride to the general character of excellence of its graduates and to the marked success and standing which they have held.

"Medicine in the past generation has probably made greater advancement toward the goal of scientific exactitude than any other of the learned professions, and to it has been added a greater wealth of increased knowledge than has been achieved in centuries before. With these great achievements has arisen the necessity for much more highly educated men capable of mastering these enlarged fields of knowledge, and corresponding revolutionary advances in the standards and demands of medical education. Great laboratories with trained specialists in research lines who devote their exclusive time to research work and teaching have become an essential in the equipment of institutions which expect to remain in the forefront of future progress. These laboratories require vast sums of money for their equipment and maintenance to say nothing of the necessary salaries of expert teachers who in this work are shut off from the emoluments of private practice. In consequence the expense of educating a modern physician has in many of our leading institutions been found to run as high as $1,000 per year for each student. The tuition fees however are in few schools more than $250 a year, and in the University Medical College are only $100. To maintain its position in advanced medical education therefore it is evident that no school can be self-maintaining on the basis of its tuition fees as its only source of income. Such education is only possible where endowments are available. Such endowments are lacking in the University Medical College. Up to the present time our work has been equal to the best and to-day we are recognized by the Association of American Medical Colleges and by the Council on Medical Education of the American Medical Association, as one of the four standard schools of the State of Missouri.

"Such a rank and standing however can obviously not be maintained long in the future progress of medical education without endowment. Therefore be it resolved: That the trustees of the University Medical College of Kansas City, Mo., proud of its past, loyal to its many high-class graduates, and devoted to the highest interests of a grand profession, rather than suffer a lost prestige or accept any lesser position among the medical schools of America, do now in view of future necessities, and in the assurance of its present high rank, and for the good of future progress in medical education in Kansas City, and the State of Missouri, announce that with the end of the present teaching year it shall surrender its dearly loved privilege to those institutions financially able to meet the demands of future education in medicine."

The Anesthetist.—The anesthetist should be thoroughly skilled in local, venous, spinal, rectal and general anesthesia. He should be conversant with the minutest details in connection with all its branches, and be competent to carry them out. A special study should be made of the different drugs employed, more especially of the newer preparations. He will then be in a position to teach the student a subject which is of the utmost importance to the public at large.—E. C. Ryall, in the *Practitioner*.

Book Notices

THE SOCIAL EVIL IN CHICAGO. A Study of Existing Conditions with Recommendations by the Vice Commission of Chicago (a Municipal Body Appointed by the Mayor and the City Council of the City of Chicago) and Submitted as Its Report. Chairman, Dean Walter T. Sumner, 117 North Peoria Street, Chicago. Paper. Pp. 368.

It is largely owing to the efforts of the medical profession that a new interest has been aroused regarding questions relating to sexual vice and a new sense of danger to the public welfare from the institution of prostitution has been excited. The problem is seen not only to involve a relaxation of public morals, but to threaten even the existence of the race. As a consequence of this increased interest, the so-called vice commission was appointed by the mayor of Chicago to investigate conditions in that city. In this investigation the medical aspects of the question were given due consideration and the commission contained in its membership five physicians whose advice and special knowledge were of great value. The general as well as the medical public naturally await with great interest the conclusions of this body which after long deliberation has now presented its report. This report is a book of 358 pages containing the conclusions of the commission with detailed statements of the facts on which these conclusions are based.

The commission availed itself to some extent of the work of previous investigators, but also gathered information as to local conditions at first hand by statistical and detective work, carefully verified, so that the conclusions are believed to be reliable. While the exact figures are chiefly of local interest, the estimates and conclusions which have been very conservatively drawn, cannot fail to be of value to other students of the problem. The vice conditions are essentially similar in all cities, but the vice of the large city draws so extensively on smaller cities and villages for support and patronage that it becomes, to a large extent, the vice of the country as well, and the disease engendered by this disgrace of civilization is spread throughout the land. Especially to the country physician who must often meet and care for the results of city vice, this distribution of the evil must be of special interest.

The practical conclusions of the Chicago investigation are summed up in a program which is expressed as follows: constant and persistent repression of prostitution as the immediate method, absolute annihilation as the ultimate ideal. For carrying out this program two agencies are proposed: the appointment of a morals commission and the establishment of a morals court.

The report deals in detail with the present conditions in Chicago. The exploitation of vice is shown to be a vast commercial enterprise involving about 5,000 regular prostitutes with a larger but unknown number of semiprofessional and clandestine prostitutes. The profits of this business are estimated at at least $15,000,000, annually of which a large share goes to the disorderly saloons, a considerable part to men who control and live on the unfortunate women, and a portion at least is used to secure protection from the law and influence political action. The relations of the evil with saloons, the police, economic conditions, especially the influence of poor wages, long working hours, and fatigue on the moral stamina of women, and the manner in which various places of amusement are made accessory to vice and contribute to the downfall of girls, are the topics of detailed discussion.

Among the remedial measures the commission includes the treatment of venereal diseases, the better supervision of homes, a revision of the criminal law, more skilful treatment of semidelinquent women, more rational treatment of the cases of arrested women, of the occasional prostitutes, of unmarried mothers, and more adequate provision for professional prostitutes.

In the report of the commission the medical aspects of the social evil are appreciated at their true value. It is not to be expected that such a work should afford any comprehensive treatment of this subject. The pathologic effects of the evil are plainly, but conservatively stated. The chief interest, however, centers in the medical methods of control proposed. These are:

1. Registration of venereal disease.
2. Segregation of the infectious.
3. Supervision of candidates for marriage.
4. Registration of births.
5. Compulsory treatment of the eyes of new-born babes.
6. Hospitalization of infected prostitutes.
7. Hospitalization of those innocently infected.
8. A study of eugenics.

In reference to venereal disease the discussion develops nothing new except the proposed extension of the powers of the health department and the apparent sanction of the commission to methods of individual prophylaxis. The report states:

"Under the police powers now granted by the state, except where specifically limited by statute, the department of health could quarantine persons when notified of venereal disease in them by physicians. To secure proper enforcement of this right, it should be specifically guaranteed by statute." "The health department should have the right to inspect prostitutes by a legal extension of the right granted to it to inspect other persons exposed to contagious disease. This will require an amendment of the statute which interferes with the logical right of the health department in this particular." The report evidently intends that these large powers shall be conscientiously and thoroughly exercised. The following is the program of examination:

"The examination of infected persons by the department of health should include: (a) physical; (b) laboratory; (c) gonorrhea by microscope; (d) syphilis, by microscope and Wassermann blood-test; (e) quarantine in hospital; (1) in homes when under age; (f) notifying of venereal disease to department of health; (g) names of all infected persons supplied to department of health."

That this is a large program cannot be denied. Logically it would apply to the infected male as well as to the female and it would be unjust and probably inefficacious to make a discrimination. At any rate such a program needs thorough education of the people to the dangers of these diseases before such measures for their suppression can find sufficient support to render them effective.

The apparent attitude toward medical examination of prostitutes and personal prophylaxis after intercourse is striking. It might have been expected that the timidity or prejudices of the lay members of the commission would have prevented the discussion of this somewhat tabooed subject or secured some condemnatory statement. We are glad to see that this is not the case. No thorough discussion of the subject is undertaken and *réglementation* is by no means officially approved. But there is evidently a fair recognition of the fact that prophylactic examinations may under proper regulations effect a diminution in the amount of venereal disease and the usefulness of certain methods of prophylaxis after intercourse is recognized. This is not to say that there is any minimizing of the value of moral and educational measures of prophylaxis.

The great importance of this report is hardly to be overestimated. It should form the subject of careful study and it is to be hoped that by the early institution of some of the measures recommended, the extent of the social evil may be considerably reduced.

THE ANATOMIC HISTOLOGIC PROCESSES OF BRIGHT'S DISEASE AND THEIR RELATION TO THE FUNCTIONAL CHANGES. Lectures Delivered in the Russell Sage Institute of Pathology, City Hospital, New York, during the Winter of 1909. By Horst Oertel, Director of the Russell Sage Institute of Pathology, New York. Cloth. Price, $5 net. Pp. 227, with 45 illustrations. Philadelphia: W. B. Saunders Co., 1910.

This is an unusually well-illustrated and well-printed book. The illustrations are partly colored pictures of pathologic kidneys and partly reproductions of microphotographs.

The book contains lectures delivered in the Russell Sage Institute of Pathology during the winter of 1909. They are interesting and give the results of extensive experience, and careful thinking; they are purely pathologic or as the author puts it, have to do with the "morphology of nephritis."

The author deprecates the use of the terms "parenchymatous," "interstitial" and "diffuse." He also regards as

equally objectionable "the terms 'acute' and 'chronic,' for they not only do not describe with any degree of precision the time limit of nephritis or the rapidity of its formation and its progress but they have lost in the course of pathologic investigations any definite significance with regard to a particular process or group of processes." His classification of kidneys changed by Bright's disease may be summarized as follows: nephritis simplex is represented mainly by varying combinations of parenchymatous degenerations and inflammatory edema but require no descriptive term such as "degenerativa" "exudativa," "hemorrhagica" and "prolifera," which describe varieties. "When in such kidneys, loss of parenchyma occurs with connective-tissue growth and vascular changes the term 'nephritis degenerativa et productiva' is used." The term "nephritis productiva" is used as synonymous with "interstitial nephritis." These forms of nephritis are described in detail and illustrated fully and well.

This book is interesting not so much for its descriptions as for its excursions into general pathology and physiology, as applied to renal diseases. For instance, the second lecture is largely devoted to a discussion of the different views of the functions and their relations to pathologic changes.

The excursions into the field of general pathology consider such subjects as degenerations, edema, inflammation, cardiac hypertrophy and other heart changes; arteriosclerosis and their relation to nephritis. The history of our knowledge of these subjects and the varied views held by pathologists are fully given and judiciously considered.

The author believes that many chronic cases of nephritis in middle and late life are due to degenerative changes in kidneys which were effected in early life by some infection and from which it was supposed that there had been perfect recovery. The possibility of the latter he doubts.

He also believes that tube casts are not of definite uniform character and derivation. "Epithelial cells, by granular disintegration and subsequent hyaline transformation can furnish material for their formation." "A colloid secretion is furnished by the epithelium and may produce casts or such a substance may be formed by degeneration and transformation of the cells and lastly both of these substances may fuse with an inflammatory albuminous exudate." He does not believe that cylindroids have the same origin or significance as casts.

Pathologists will enjoy this book, though they may not agree with its author in all things. Others who wish to inform themselves about pathology as applied to Bright's disease can find nothing better or more up to date.

CHOLERA AND ITS TREATMENT. By Leonard Rogers, M.D., F.R.C.P., F.R.C.S., Physician, Cholera Wards, Medical College Hospital, Calcutta. Oxford Medical Publications. Cloth. Price, $4. Pp. 236. New York: Oxford University Press, 1911.

This work reviews the history of cholera epidemics, including the recent prevalence of the disease in Russia. The causation, pathology and clinical description, including diagnosis and prognosis, are discussed in separate chapters, but the chief interest of the work centers in the final chapter on treatment. The author shows that the mortality has maintained a high figure, approximating 60 per cent. under all previous forms of treatment. This mortality has been reduced, according to Rogers, to 23.3 per cent. by the use of intravenous injections of hypertonic saline solutions and the administration of permanganates by mouth. The book, while not of immediate practical value to the majority of physicians, will be read with interest by those who desire special information on this subject.

A MANUAL OF GYNECOLOGY. By Thomas Watts Eden, M.D., C.M., Edin., F.R.C.P., Lond., Obstetric Physician with Charge of Out-Patients, and Lecturer on Midwifery and Gynecology, Charing Cross Hospital. Cloth. Price, $5 net. Pp. 632, with 272 illustrations. Philadelphia: P. Blakiston's Son & Co., 1911.

This book, while not complete, is a valuable contribution to diagnosis and treatment in general gynecologic disorders. The author has outlined the pathologic teachings on endometritis up to the present and has indicated the significance of the blood-count in inflammatory conditions of the pelvis. In cases in which the etiologic factor is positively determined, he recommends the employment of bacterins, especially in gonorrheal infections. In the treatment of procidentia he clings to the questionable procedure of ventral fixation, although under the vaginal technic he describes the vaginal operation and its limitations. Eden gives the old Emmet technic for complete lacerations in detail but omits to mention the advantages which are gained by the Tait operation. The description of the operation for retroflexion is extremely valuable. The indications are given for conservative operative procedure, and the symptomatology of uncomplicated retrodeviations of the uterus are recognized. The limitations for the Alexander-Adams operation are definitely stated, and the advanced views on this subject are given.

DIE AKUTE POLIOMYELITIS BZW. HEINE-MEDINSCHE KRANKHEIT. Von Dr. Ivar Wickman, Privatdozent am Karolinischen Institut zu Stockholm. Paper. Price, 5 marks. Pp. 108, with illustrations. Berlin: Julius Springer, 1911.

This monograph of 108 pages is an unchanged reprint of the section with the same title from the "Handbuch der Neurologie," edited by M. Lewandowsky and published by Springer. The various phases of the disease are considered carefully and fully, especially the symptomatology and the epidemiology and full notice is taken of the recent work on the etiology. This is probably the best discussion of the epidemiology that we have; the rôle of abortive cases and healthy carriers in spreading the disease is clearly shown in the author's study of Swedish epidemics. At the end is a good bibliography. The name *Heine-Medinsche Krankheit* was suggested by Wickman some years since in order to include under one term all the forms of clinical disease caused by the virus of acute poliomyelitis; the spinal, the bulbar, the encephalitic, etc. It does not seem at all necessary to introduce this name into English literature. Indeed, it may be doubted whether its introduction will ever serve any real useful purpose.

LANDMARKS AND SURFACE MARKINGS OF THE HUMAN BODY. By L. Bathe Rawling, M.B., B.C., F.R.C.S., Surgeon with Charge of Out-Patients, Demonstrator of Practical and Operative Surgery, Late Senior Demonstrator of Anatomy at St. Bartholomew's Hospital. Fourth Edition. Cloth. Price, $2 net. Pp. 96, with 29 illustrations. New York: Paul B. Hoeber, 1911.

This is a very neat and comprehensive little volume of about 90 pages. Most of the illustrations are from the justly popular retouched photographs, while certain necessary outline diagrams are added where they can better elucidate the subject. The text is strictly limited to the scope expressed in the title, and the author has shown considerable restraint in carefully avoiding any suggestion of surgical application of the abundant material furnished, contenting himself with adhering to the original special purpose and maintaining the handy size of his volume. It is a very convenient book for the student and the busy practitioner.

MANUAL OF CYSTOSCOPY. By J. Bentley Squier, M.D., Professor of Genito-Urinary Surgery, New York Post-Graduate Medical School and Hospital, and Henry G. Bugbee, M.D., Instructor in Genito-Urinary Surgery, New York Post-Graduate Medical School and Hospital. Morocco. Price, $3 net. Pp. 117, with illustrations. New York: Paul B. Hoeber, 1911.

This is an admirable primer of cystoscopy, worthy of recommendation as a truthworthy guide to beginners in the inspection of the vesical walls. Both text and illustrations are instructive.

Medicolegal

Circumstances Under Which a Patient Cannot be Charged for Services Rendered at Another's Request

The First Appellate Division of the Supreme Court of New York in Edson vs. Hammond (127 N. Y. S. 359) reverses a judgment for services recovered by the plaintiff and orders a new trial. It says that a brother of the defendant sought to have him adjudged a lunatic. To take charge of the medical side of the case he employed an alienist, who employed other alienists. The defendant, after a hearing, was committed to Bellevue Hospital, and was then transferred to a private sanitarium. At the latter, he became ill, and, although he had his own physician, the latter was not notified to attend

him, but the alienist above mentioned called on the plaintiff to attend him professionally, he being informed that his new patient was accused of being a lunatic. The plaintiff found the defendant unconscious when he called on him, and, having made his diagnosis, was told by the alienist to continue his treatment of the case, which he did. The defendant remained unconscious about two days, and the plaintiff visited him professionally for about two months, making two blood and four urinary examinations.

It was conceded that the defendant never made any request that the plaintiff attend him, either to the plaintiff or to any other person, nor did the defendant promise to pay the plaintiff for his services, nor make any payment on account of his bill. Liability was sought to be predicated on the theory that, when a physician is called by a third person to attend a patient in a serious condition, he can recover from the patient when his services are accepted without objection, and that this is so even when the patient is unconscious and therefore not able to acquiesce. This proposition was sought to be sustained by two cases: Sceva vs. True, 53 N. H. 627, and Cotnam vs. Wisdom, 83 Ark. 601. The general rule deducible from these cases is thus stated: "Where a physician renders services to a patient, either under an express employment or with his consent, the law raises an implied promise on the part of the patient to pay him what the services are reasonably worth. So, also, where in a proper case a physician renders services to a person without his request or consent, or where one is injured by an accident rendering him unconscious, the law will imply a promise from him who received the benefit of the services to pay for them." 30 Cyc. 1596. The last sentence quoted rests on the authority of the Arkansas case, and of Pray vs. Stinson, 21 Me. 402.

But in the case before the court even the doctrine of the Arkansas and Maine cases would not warrant a recovery beyond the services rendered on the two days when the defendant was unconscious; nor would it seem to justify a recovery for physician's services rendered to one accidentally injured, even if rendered unconscious, where immediate attention is not required, and particularly in a city where a free ambulance service exists, and where free hospital treatment is furnished by the municipality. The natural course there to pursue is to call on the gratuitous service thus provided, and the rule founded on the necessity and humanity of other cases does not apply.

As to the other visits, liability was sought to be attached on the ground that the defendant did not protest against, or object to, the attendance of the plaintiff. To establish this liability, three things should have concurred: (1) The defendant should have known that the plaintiff was attending him professionally. (2) He should have been in such a condition, mentally and physically, that he was free to object or protest. (3) He should have either expressed his assent to the plaintiff's attendance or failed to object thereto.

As to the first requirement, it appeared that the defendant was constantly being visited at the sanitarium by physicians in the employ of his brother, engaged as alienists to examine into his mental condition. The names of nearly twenty such alienists appeared as having then visited and examined him, and the defendant said they all felt his pulse, looked at his tongue, examined the nurse's record and talked with him, many of them leaving medicine for him, and most of them wanting him to take medicines. He could not protest against their presence, for he was in restraint and under observation, even though he was allowed to drive out with his own attendants. There was no proof that he ever regarded the plaintiff as anything else than one of these alienists, whose visits he was required to receive. There was no proof that the samples of blood and urine submitted for examination were obtained with his knowledge, or that he knew of the use to which they were to be put. On this record, it cannot be said that the defendant ever knew that the plaintiff was attending him professionally.

As to the second requirement, the fact that the defendant was under restraint and that he was required to permit the visits of all these physicians, as well as his then mental condition, might furnish reason for his failure to protest. He was not told that his own physician was trying to visit him, nor did it appear that he had any knowledge that he was physically ailing. As to the third requirement, it was conceded that he never verbally ratified the plaintiff's employment, nor did he protest against the same, which is explained by the discussion of the two preceding requirements.

The court is not now concerned with the question of who may be responsible for payment for the plaintiff's services, save in so far as it is called on to determine that, on the record, the defendant is not responsible. Nor is the situation changed by cases holding that the professional privilege existed to a sufficient extent to prevent the divulgence of information acquired by a physician called in by a third party to attend a person in a comatose state.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, Los Angeles, June 27-30.

American Academy of Medicine, Los Angeles, June 23-26.
American Climatological Association, Montreal, Canada, June 13-14.
American Medico-Psychological Association, Denver, June 19-20.
American Ophthalmological Society, New London, Conn., July 11.
American Otological Society, Atlantic City, June 26-27.
American Proctologic Society, Los Angeles, June 26-27.
American Surgical Association, Denver, June 19-21.
Arizona Medical Association, Los Angeles, June 26.
Conf. of Bds. of Health of N. America, Los Angeles, June 30-July 1.
Maine Medical Association, Augusta, June 28-29.
Massachusetts Medical Society, Boston, June 13-14.
Nat'l Assn. for Study and Prev. of Tuberculosis, Denver, June 20-21.
National Association for Study of Epilepsy, St. Louis, June 16.
New Jersey, Medical Society of, Spring Lake, June 13-15.
North Carolina, Medical Society of State of, Charlotte, June 20.
Oregon State Medical Association, Los Angeles, Cal., July 10.
South Dakota State Medical Association, Pierre, S. D., June 14-16.

AMERICAN GYNECOLOGICAL SOCIETY

Thirty-Sixth Annual Meeting, held at Atlantic City, N. J., May 23-25, 1911

The President, DR. REUBEN PETERSON, Ann Arbor, Mich., in the Chair

The Treatment of Placenta Prævia at the Sloane Hospital for Women

DR. EDWIN B. CRAGIN, New York: In the first 20,000 deliveries, cases of placenta prævia were treated by different methods: by Braxton Hick's version and using the half breech as a uterine tampon, or by gauze tamponade of the cervical canal and vagina, or by dilatation of the cervical canal by the Voorhees bags. In the later cases the method consisted of dilatation of the cervix and control of the hemorrhage with the largest Voorhees bag which could be introduced, i. e., No. 3 or 4, and, after good dilatation was obtained, either a version was done and the child delivered by the breech, or if the placenta prævia was lateral, or even marginal, with slight hemorrhage, and the vertex was presenting, the membranes were ruptured and the head allowed to come down and exert pressure on the lower uterine segment and the edge of the placenta, the delivery being expedited by the forceps, if necessary. This use of the elastic bag is extra-ovular, the membranes being kept intact until the bag passed the cervix and good dilatation was obtained. In the 5,000 later deliveries there were forty-nine cases of placenta prævia, fourteen complete, and thirty-five of the incomplete variety. There were two deaths among those of the complete variety, or 14.2 per cent., and two deaths in the thirty-five of the incomplete variety, or 5.7 per cent. In the 20,000 cases there were thirty-nine cases of complete placenta prævia with nine deaths, or 23 per cent., and 135 cases of incomplete placenta prævia with eleven deaths, or 8.1 per cent. The total fetal mortality was 51 per cent. in the second and 60.3 per cent. in the first series. Regarding the question of placenta prævia being an indication for Cesarean section, I have never met a case in which I considered it indicated.

Placenta Prævia

DR. EDWARD P. DAVIS, Philadelphia: Of late our attention has been drawn to the value of intra-ovular pressure in placenta prævia by inserting, with suitable forceps, a good-sized bag through the membranes or placental substance, and by dilating this bag fully, thus controlling hemorrhage through pressure and hastening delivery. In partial placenta prævia treated with or without intra-ovular pressure by a dilating bag, the maternal mortality is not high. The high fetal mortality of placenta prævia, treated by vaginal methods, and the considerable maternal mortality, naturally suggest the possibility of delivery by abdominal section. The advocates of suprasymphyseal section urge its adaptability in these cases. In three cases of central placenta prævia in which I operated as soon as the diagnosis could be made out, the mothers recovered without incident; one normal child at term did well; the second child was a monstrosity, the third child, which was premature, did not long survive. There is, I believe, a close analogy between ectopic gestation and central placenta prævia. In both the cardinal dangers are those of hemorrhage and infection; in both palliative measures are insecure and unsatisfactory; in both operative treatment is our only reliable resource. In the present stage of our knowledge no method of treatment compares with abdominal Cesarean section in central placenta prævia, if the lives of both mother and child are to be considered. The mortality of abdominal Cesarean section in uninfected cases is now less than 2 per cent. in a large number of cases, and the fetal mortality in a considerable number is often nothing. A considerable amount of bright vaginal hemorrhage in a pregnant patient is always a dangerous symptom; and during the latter months of pregnancy, mother and child being previously in good condition, such hemorrhage should be considered as indicating a condition fully as critical as ectopic gestation. Such cases should be seen immediately by a competent obstetrician and a very careful examination made. Under favorable conditions delivery by abdominal Cesarean section should greatly improve the chances of both mother and child.

Analysis of Forty Consecutive Cases of Placenta Prævia

DR. J. CLIFTON EDGAR, New York: Ten of these cases were central, nine partial, twenty-one marginal. Seventeen were emergency ones. Seventeen were first seen at the onset of the bleeding; in twenty-three, the hemorrhage had lasted from a few hours to several days. Twenty-three cases only were exclusively treated by the hospital, the remaining seventeen had received various treatments before entering this hospital service. In twenty-nine cases the cervical dilatation was two fingers, or less when first seen. Treatment embraced cervical and vaginal gauze packing in thirty-two cases; de Ribes bags in three cases; Pomeroy bag in seven cases; bimanual dilatation as a primary measure in two, and following gauze packing in ten cases. Induction of labor in nine cases. The methods of delivery were: version and breech extraction in twenty cases; forceps in six cases; simple breech extraction in five cases; spontaneous delivery in eight cases; making, with one case undelivered, forty cases. Post-partum uterine tamponade in forty cases. Maternal mortality, 7.5 per cent.; infant mortality, 32.25 per cent.

The Best and Worst Methods of Treating Placenta Prævia

DR. HENRY D. FRY, Washington, D. C.: The best and the safest method to deliver a woman suffering from placenta prævia is purely an obstetric problem and its decision should rest with the expert obstetrician. Experience clearly demonstrates that maternal interests are guarded best by evacuation of the uterus as soon as the diagnosis of placenta prævia is made. Rapid dilatation of the cervix has no place in the treatment of placenta prævia, whether performed manually, by the Bossi dilator, or by vaginal Cesarean section. Version by the podalic method is never advisable unless uterine action has softened and dilated the cervix sufficiently to insert the hand. Slow delivery of the infant should be substituted for extraction. The artificial dilatation sufficient to perform bipolar version is comparatively safe, while that necessary for the insertion of the hand and podalic version is dangerous. After version has been accomplished, the leg, breech and body of the infant successfully plug the cervical opening and by pressure against the area of uteroplacental detachment prevents the further loss of blood. Bleeding being absolutely under control, every effort should be made by slow delivery to secure dilatation and thereby prevent laceration of the lower uterine segment. My rule is to discontinue anesthesia after having performed version and to hasten uterine action by rubbing the fundus of the uterus, and by encouraging the patient to make use of her auxiliary muscles to supplement the uterine force. The danger is not over with the successful termination of labor. The mother has yet to run the gauntlet of post-partum hemorrhage and sepsis. The proper application of the intra-uterine tampon of sterile gauze is a most valuable agent in preventing further loss of blood. Laceration of the lower segment of the uterus is a frequent cause of fatality in placenta prævia. The complication favors both hemorrhage and sepsis. The least dangerous obstetric interference is that necessary to perform bipolar version. The fingers do not come in contact with the danger zone but are passed through the internal os and directly within the ovular sac. Abdominal Cesarean section in placenta prævia is advisable in central placenta prævia complicated by an undilated cervical canal. Not only must the cervix be undilated, but the tissue must be hard and unprepared for artificial dilatation. This condition exists only in about 5 per cent. of all cases of placenta prævia, and is almost never met with in multipara. Contra-indications for abdominal Cesarean section are (1) excessive loss of blood before the opportunity arises for performing the operation, (2) a soft and dilatable cervix, and (3) a partial or marginal placenta prævia. Previous attempts to dilate and deliver the case by the natural passages; the use of gauze tampons and rubber bags to control hemorrhage, place such cases on the undesirable list, and if subjected to surgical skill, a Porro operation should be substituted for Cesarean section.

DISCUSSION

DR. RICHARD C. NORRIS, Philadelphia: There are cases in which placenta prævia is best treated by abdominal Cesarean section, but the number will always be limited, probably about 5 per cent. of all cases of primiparæ. The ideal conditions for Cesarean section are a rigid cervix, a viable child, a mother who is a good surgical risk, and the diagnosis made at an early period. We must not, in order to save the child's life, which is problematical, sacrifice the life of the mother. The intra-uterine tampon to prevent post-partum hemorrhage must not only be intra-uterine but it must be placed firmly in the vagina so that the cul-de-sac is filled and upward pressure made to control bleeding.

DR. J. WHITRIDGE WILLIAMS, Baltimore: In cases requiring nothing more than rupture of the membranes I have used exclusively the Champetier de Ribes balloon. I have had no maternal deaths. A dangerous method of treating placenta prævia is by rapid dilatation, either with the fingers or with some instrument. In a number of cases I have been obliged to remove the uterus by abdominal section to overcome the damage done by this treatment. As to abdominal Cesarean section, the indications for it are so extremely infrequent that one can do without it, and I have not been able to see the justice of the mode of reasoning of the Germans who have been extremely enthusiastic over it.

DR. WALTER P. MANTON, Detroit, Mich.: I have used all the methods advocated, except Cesarean section, and I do not recall having seen a case where I thought this operation would be applicable. In the last 1,989 cases of confinement at the Women's Hospital in Detroit we had nineteen cases of placenta prævia, and in only one was the placenta centrally implanted. In my own experience, I have never lost a mother with the methods that have been advocated. The infant mortality has been between 50 and 60 per cent. I have not had great success with the Braxton Hicks method of bipolar version, but by the use of the de Ribes bag and Voorhees bag my patients have come through safely, although the infant mortality has been high.

DR. WILLIAM S. STONE, New York City: I wish to mention a case of accidental hemorrhage in which I decided to do the

vaginal operation after the patient was on the table, as the conditions were such that it was the easiest and quickest way to remove the contents of the uterus, and it proved to be such. I have never done vaginal Cesarean section for true placenta prævia.

DR. J. M. MUNRO KERR, Glasgow, Scotland: In domestic practice we can do no better than to do version by the Braxton Hicks method. That is the problem for the general practitioner. In the Glasgow maternity hospital we have tried chiefly two treatments—bipolar version and the treatment by bags, and so far our results have differed very little by the use of the two methods. We have, if anything, a little lower fetal mortality, and if anything, a slightly lower maternal mortality, but it has been very slight indeed, and consequently I can understand very clearly the attitude of those who support the use of the bag and bipolar version. But the real point of importance at the present time is the position of Cesarean section. This operation in domestic practice has a place in skilled hands, but I believe we have given it rather half-hearted support. There are certain cases in which Cesarean section is called for. They are: (1) The child must have reached nearly a full term; (2) the child must be viable and in good condition; (3) there must be probably a defect in delivery, either in regard to the pelvis, slightly small, or as regards rigidity of the soft parts; (4) it should be employed in women late in life who must possibly have another chance to bear a child; (5) the operation should only be employed where there has been danger of infection. If we give it out as decidedly our opinion that in cases of that sort Cesarean section is indicated, we would put the position of this operation on a proper basis, and in the future we might possibly be able to extend it or make its application less limited.

The Use of Iodin in Skin Sterilization for Surgical Purposes

DR. J. WESLEY BOVÉE, Washington, D. C.: So far as can be ascertained by culturing epidermic scrapings, weak dilutions of iodin, even to 5 per cent. of the official tincture, thoroughly sterilize the surface of the skin for a period of time lasting from two to fifteen minutes after its application. This inhibitive action of absolute alcohol is greatly enhanced by the addition of iodin to an equivalent of 5 per cent. of the U. S. P. tincture. Pubic hair placed in iodin dilutions of 5, 10, 20, 30 and 40 per cent. strength (of the official tincture), respectively, for 2, 3, 5, 8, 10, 12 and 15 minutes, respectively, all showed growths after three days' incubation, while using 50 per cent. dilutions under the same conditions practically always prevented growths. Control scrapings of skin taken from the abdomen above the umbilicus, over periods of time varying from two minutes to two hours when 40 per cent. dilutions were used, always showed negative results as to colonies. Cultures from hair and skin that had been subjected to 50 per cent. dilution of tincture of iodin never produced growths. Tincture of iodin diluted with an equal amount of absolute alcohol may be considered reliable as a local application in preparation of the skin or mucosa in any part of the body. Dilutions of less strength are unreliable, if hairs or large hair follicles are in the field of operation. The 50 per cent. dilution of tincture of iodin, if not carelessly applied, is not liable to injure the skin.

(To be continued)

ILLINOIS STATE MEDICAL SOCIETY

Sixty-First Annual Meeting, held at Aurora, May 16-18, 1911

The President, DR. A. C. COTTON, Chicago, in the Chair

Medical Service of the State Hospitals

DR. CHARLES F. READ, Watertown: The physical examination of patients extends from the crown of the head to the sole of the feet, may include pulse tracings, blood-pressure estimations, examinations of the ocular fundi, body fluids, etc., and is completed by a painstaking neurologic investigation. Spinal puncture has become a matter of routine in two or three of our hospitals, and is carried out at times in nearly all institutions. With the aid of this procedure we are accomplishing some surprising results in the matter of diagnosis. The report of a positive Noguchi together with an increased lymphocyte-count at once assures us that we are dealing at least with an organic case if not paresis. The mental examination begins not with the patient but with his progenitors, tracing back as many generations as possible, and not only taking into account the existence of actual insanity, epilepsy, alcoholism and imbecility, but also of neuralgias, tics, tramp life, fears, chorea, oddities, etc. After this, so far as possible, the patient's life history from early childhood on is obtained with a view of determining what manner of man has become involved in difficulties arising out of a lack of proper reaction to stress and strain. Turning to the patient himself, a study is first made of his reaction to the hospital environment, the value of which observations often depends on the proper interpretation of a single act or a half dozen words.

DISCUSSION

DR. L. C. TAYLOR, Springfield: A great deal has been done in the last few years since the adoption of the civil service law in regard to the state institutions. A few years ago the institutions of Illinois were looked on as custodial, and the treatment of mental conditions was hardly entered on at all. The establishment of the psychopathic hospital at Kankakee, a short time ago, gave a great impetus to those connected with state institutions. The establishment of this psychopathic hospital has given interns and physicians throughout the state the opportunity of going to that institution and studying under experienced teachers, not only psychiatry but also pathologic conditions. The mere fact that men working in the state hospitals can be promoted by competitive examinations has led to improvement in the service.

DR. HUGH T. PATRICK, Chicago: It is for the profession and the public at large to keep on sowing the seed and keep on upholding the hands of men who improved the public service in the insane hospitals. If people are not afraid to entrust members of their families to physicians outside of these institutions, why should they mistrust those who are at the head of these institutions—men who have the same conscience and the same earnest endeavor to do what is right and that which is best for these patients? It devolves largely on the profession to instruct the public that we have good state institutions, and that we have good men at the head of them.

DR. J. W. PETTIT, Ottawa: We must not lose sight of the fact that an organized profession of the state inaugurated the movement that made these things possible.

DR. CARL E. BLACK, Jacksonville: A new class of men sent to the state institutions are identified with the medical profession as they never were before, and they bring to us information we never received before. They are interested in their work. They are seeking these promotions. They are taking up the work with new enthusiasm, and with a new incentive. In that way the care of the insane, the study of insanity, is brought to the profession by these men by identifying themselves with our local and state medical societies.

DR. JULIUS GRINKER, Chicago: We must realize that the insane patient is a sick patient. Some physicians discourage the sending away of patients who need institutional care. The institutional man must come in contact with the medical profession in order to stimulate him to do good work, and the more closely we come in contact with them the more we appreciate their work and that of others, the better work we will get out of them. This movement is progressing not only throughout this country but everywhere. Psychiatry should be brought in touch with everything that medicine can bring to bear on it from all sides.

Experimental Transplantation of Legs

DR. V. D. LESPINASSE, Chicago: Blood-vessel anastomosis will not save every crushed limb, but it will save a great many that are now amputated. The crushed and contused portion of the blood-vessels must be removed. If one cannot bring the vessel-ends together after this has been done, the extremity must be shortened until approximation is possible. If the nerves are intact, the probability of success is increased as section of the nerves tends to vasodilatation, and hence stagnation of the blood-stream, thus predisposing to thrombosis.

XUM

A crushed limb should not be amputated without a careful examination as to the possibilities of resecting the crushed portion and replacing the hand or foot back on the stump.

Prevention of Blindness

DR. THOMAS A. WOODRUFF, Chicago: Preventable blindness is due to numerous and varied causes. The first steps have been taken toward suppressing one cause of blindness, namely, ophthalmia neonatorum, which for years resulted in more blindness, with the exception of optic nerve atrophy, than any other local affection. The public must be educated not only to the existence of ophthalmia neonatorum, and the terrible consequences that may result from its presence, but to the fact that it is preventable, and that their aid is necessary in securing such legislation as will make compulsory the use of such measures as will prevent this disease. Education in the movement may be carried on by means of a wide distribution of literature, leaflets and various forms of propaganda, photographic exhibits, lantern slides, press notices, magazine articles and public speaking before all kinds and grades of audiences. The statute books of many states contain laws relating to the prevention of ophthalmia neonatorum, but unfortunately these laws have become more or less of a dead letter, and an effort should be made requiring their enforcement. If this were done and a few prosecutions obtained for failure to adhere to the law, much benefit would be reaped in the fight for the prevention of blindness from ophthalmia of the new-born. Laws should be passed which would require state control of the blind. All cases of inflammation of the eyes in new-born babies should be reported by physicians and midwives. One of the most important factors in the suppression of the disease is the registering and licensing of midwives, for many of these women are hopelessly ignorant, dirty and careless, and that they play no small part in the effort to check this disease must be admitted.

DISCUSSION

DR. J. W. SMITH, Bloomington: These cases do not come to the specialist first-hand, but usually go to the general practitioner first, and for this reason this subject should interest the general practitioner the same as it does the specialist. We should emphasize the importance of antiseptic precautions at and during the time of parturition or labor.

DR. A. L. ADAMS, Jacksonville: The solution of the problem appears to be one of education. People should know the facts, and I believe when they learn the possibility of prevention of blindness by a campaign of education, as has been done with tuberculosis, then these cases will receive early treatment which will result in the prevention of blindness in a large number of cases.

DR. WILLIAM H. WILDER, Chicago: It is a lamentable fact that many practitioners to whom such cases are referred either become rusty in their knowledge of the treatment of such cases, or they have never acquired it, because I personally know of many cases coming from practitioners who have not treated them correctly, and the result has been that a destructive ulcer of the cornea has occurred.

(To be continued)

OHIO STATE MEDICAL ASSOCIATION

Annual Meeting, held at Cleveland, May 9-11, 1911

(Concluded from page 1602)

Mucous Colitis

DR. C. C. FIHE, Cincinnati: This is not a disease entity; it is the symptom and sign of a disease, the nature of which is not always identical. There may be all grades of pathologic changes within the mucous membrane of the colon. There is a great group of mucous colitis in which the cause lies in the pathologic conditions in and about the colon itself. Angulation of the colon has been the cause of many of my cases of mucous colitis, and the correction of the malposition by bandage or operation has been followed by a cessation of both constipation and mucous colitis.

Occasionally surgery must be resorted to. Adhesions are usually found at or near the site of angulation and again the end is accomplished.

DISCUSSION

DR. A. M. CRANE, Marion: Judging from my personal experience, most of the cases are sigmoiditis and proctitis. Most patients are neurasthenics. The treatment is varied. Cathartics should be avoided. Castor oil does well; olive oil gives good result, but the most relief is obtained from high colonic flushing with the rectal tube high in the bowel, with three quarts to a gallon of saline solution, to be followed by a 10 per cent. solution of argyrol, which is permitted to remain.

DR. J. M. RECTOR, Columbus: Practically all my patients come as a result of constipation. In many there is a history of typhoid preceding the constipation. The cause of this constipation is the relaxation of the musculature of the colon with a lack of sufficient residue to make a stool. The feces become dry and stick in the folds of the bowel and little particles of stool are retained, and when they do come away the mucous membrane comes with them, and from that denuded place comes mucus. This also allows auto-intoxication and absorption, and in the secondary symptoms the constipation, which is the cause, is overlooked. I would criticize the application of the bandage, favoring rather exercise for the muscle. I do not think angulation has anything to do with the disease.

DR. J. E. GRIEWE, Cincinnati: The causes in these cases are both mechanical and chemical. First, there is the result of absorption of chemical material, and later on the tremendous pressure from the accumulation of material. Mere regulation of the diet will not cure it. While angulations may be overestimated, they must not be neglected when they are found to any extent.

The Value of Drugs in Circulatory Diseases

DR. H. B. BLAKEY, Columbus: I believe that the heart in pneumonia is injuriously affected by digitalis. Where there is a toxemia to combat digitalis merely increases the toxic condition against which the heart must work. In these cases the solution of the difficulty will be an antitoxin. Cardiac therapy in most cases is a fight against odds, and the utmost care and judgment must be used to avoid increasing the odds by too much drugging or drugging without an exact knowledge of how the result will be reached. Drugs should never be used to restore compensation when rest in bed alone will do it, except in those cases in middle or later life in which too long resting in bed may prove injurious. Attempts to hurry compensation in a badly decompensated heart only unduly weakens the heart, and a slow recovery is really more to be desired than a too rapid one. There is no therapy in heart disease as good as physical and mental rest, which should have as its object the giving of the greatest possible relief to the heart and the least possible disturbance to the patient. Digitalis should never be given, except where there is a dilated heart with a weakened systole. It should never be given in those cases in which the heart is combating a toxemia, except when the heart is dilated, and even then we must be sure there is no degeneration of the muscle fibers of the heart. Strychnin should be limited to those cases in which it is desired to slow the heart and increase blood-pressure. Alcohol has merit as a cardiac stimulant, but it should be given over a long period of supportive treatment, except in cases of those accustomed to taking the drug regularly. Caffein should only be given in those cases in which the desire is to increase the heart-rate as well as to increase the blood-pressure. The nitrates can in no way be considered as heart tonics or stimulants. Morphin can be used without fear of any deleterious action in any form of heart disease.

DISCUSSION

DR. C. G. HOOVER, Cleveland: I cannot agree that digitalis should never be used in pneumonia. Patients with pneumonia, as well as other infectious diseases, may have myo-

cardial insufficiency, and one must rely on the size and transverse diameter of the right heart. When it is very rapid and shows a definite dulness on the right side, then is the time to use digitalis. Of course, not every patient should have digitalis, but the trouble is that it has not been given in sufficiently large doses. One milligram of strophanthin is the equivalent of 3 drams of digitalis, and yet one would not give it in 3 dram doses. Strophanthin is not indicated in all kinds of circulatory disease, but the single indication is myocardial insufficiency.

DR. M. J. LICHTY, Cleveland: The use of cardiac stimulants or cardiac tonics is not to be compared to the value of rest. It is hard to tell what remedy will do the work, and none can be depended on absolutely. Rest alone will not do everything, nor will drugs. The preparations of digitalis are many times disappointing, but they often help, in spite of the fact that the patient is going about.

DR. N. R. COLEMAN, Columbus: While there can be no doubt that digitalis is one of the most valuable remedies in many cases of cardiac or cardiovascular diseases, it is not applicable in all cases. The conditions, circumstances and complications have all to be taken into consideration.

Nitrous-Oxid-Oxygen Anesthesia

DR. ELMER I. MCKESSON, Toledo: As a routine anesthetic this surpasses any agent known when the proper technic is carried out. It may be successfully used in any operation that can be done under ether with few limitations.

Vaccine Therapy from the Standpoint of the General Practitioner

DR. LOUIS W. LADD, Cleveland: The indiscriminate use of vaccines by those ignorant of their power for good and evil is to be strongly condemned, as there are no more powerful poisons than bacterial proteids, and much harm may result from their injudicious use. Each case treated is a study in itself. Personal idiosyncrasies, variations in virulence in different strains of the same microorganism, etc., are conditions that cannot be predetermined, and must be worked out by careful experimentation in each case.

As a rule the best results with vaccine therapy have been obtained in the treatment of chronic local infections, though not infrequently brilliant results have been obtained in the treatment of acute local infections. Less satisfactory by far is the treatment of acute general infections. Vaccine therapy should not be used to the exclusion of other measures.

Rectal Feeding in Diseases of the Stomach

DR. JOHN D. DUNHAM, Columbus: A good nutrient enema is. Yolk of two eggs—300 calories; 30 gm. pure dextrose—1.200 calories; 5 gm. common salt; pancreated milk to 300 c.c. Rectal feeding cannot take the place of mouth feeding for any period of time, as subnutrition is the result. Therefore, rectal feeding has a limited field of usefulness and is not advantageous in esophageal or pyloric strictures. High enemata of normal salt solution are probably as beneficial as the usual nutrient enema. When used in uncomplicated gastric ulcer, nutrient enemata do not increase the acidity. On the other hand, when combined with total abstinence of food and liquids by mouth, the hydrochloric acidity is probably reduced. In gastric ulcer with relative stenosis at the pylorus, lavage and careful mouth feeding are better than rectal nutrients as method of treatment.

DISCUSSION

DR. JOHN P. SAWYER, Cleveland: The psychic influence of taking food has to be taken into account. The use of a large quantity of albumin, even in the form of peptone, is apt to cause bacterial decomposition in the rectum, and there is the end of usefulness of rectal feeding. The cleansing enemata and washing the bowel are often of use. The clinical benefit of giving a small food enema is not to be denied. It is of great help in carrying over a crisis but not of benefit in continued use. Rectal feeding sometimes proves a detriment in that it sets up a nervous excitement and bowel irritation.

DR. M. ROSENWASSER, Cleveland: In addition to the egg, I use malted milk, which contains sugar, and also have used dextrose and pancreatin. Rest and that will do the work.

The Surgical Aspects of Painful Indigestion

DR. G. W. CRILE, Cleveland: I have come to depend on certain phenomena and certain methods for the diagnosis. One of the most potent causes for confusion is the fact that whatever the disturbance of the body—whether the beginning of an acute infection, a physical injury of any part, a nervous strain, worry or fear, appendicitis, salpingitis, gall-stones, brain tumors—indeed, almost any disturbance of the body, it is at once reflected on the stomach as nausea, vomiting, anorexia, indigestion, etc. In the differential diagnosis of chronic appendicitis, one must consider ureteral calculi, neurasthenia, gall-stones, diverticulitis, and gastric and duodenal ulcers. Given a case of chronic painful indigestion, while the temperature and pulse may be normal, there is usually constipation, and an impairment of the general health. If in addition to the routine symptoms, there is a history of night attacks of pain at irregular intervals, gall-stones must be considered. If there is no hyperacidity, if the pain is referred rather to the chest and back, and there is a tender point between the tenth and eleventh ribs in the back, and pressure under the costal border when relaxed in a warm bath produces local tenderness and referred pain; if the kidney is negative to *x*-ray, a diagnosis of gall-stones or chronic cholecystitis may be made.

If the pains are distributed over the whole abdomen, constipation quite marked, frequently a single darting pain; if the ureters are negative for stone, and there is local tenderness when there is pressure on the appendicular region, and production of referred pain identical with that complained of; and if one makes deep palpation over the appendix at intervals of about four hours and there is an increasing tenderness, one may diagnose appendicitis. The latter method will often unmask a chronic appendicitis in ambush. Treating the left iliac fossa in precisely the same manner as a control, if there is chronic appendicitis there will usually develop after several vigorous examinations a definite and high degree of tenderness in the right fossa, while the left remains negative. The importance of this method cannot be overestimated. In chronic appendicitis there may be a certain amount of hyperacidity, especially if there is associated nervous strain. Gastric ulcer usually frankly announces itself, as by immediate distress on taking food, hyperacidity, free blood and, of course, hematemesis.

It is duodenal ulcer that gives the greatest interest. The frequency of this lesion has only recently been appreciated. There is no lesion that can with such confidence be diagnosed on the clinical history alone. There will be rhythmic periods of daily pain at certain intervals after meals. When the stomach is well emptied this burning, stinging or heavy pain appears, with scalding eructations and much gurgling of gas in the intestines. It wears away after an hour or two, but is almost immediately relieved by food. Lying on the left side sometimes gives relief. There is no vomiting unless obstruction has developed. A test meal shows the digestion to be good, food passing out of the stomach promptly, but the acidity is high. Local tenderness appears when the ulcer has penetrated the wall. The fact that there is pain in the region of the appendix, of the gall-bladder, of gastric and duodenal ulcer and no pain in lesions of the mucous membranes of the intestines is explained on the law of phylogenetic association. Pain is associated with the excitation of nociceptors, and these may take precedence over and dispossess the routine functions, such as peristalsis, secretion and absorption and their occupancy of their respective nervous mechanisms, just as fear does. This hypothesis readily explains the extraordinary improvement in the digestive functions and the general health following the removal of an appendix so slightly altered physically that only the clinical results in many cases could persuade one that this change could be an adequate cause for such far-reaching and important symptoms. It would also explain certain gall-bladder phenomena—indigestion, loss of weight, disturbed functions, etc.

The Renal Function in Surgery

DR. LOUIS E. SCHMIDT, Chicago: Renal function tests are decried by those individuals who are not in a position to meet the exacting conditions or are not competent to carry on this work. In kidney surgery at the present time, collection of the urine from each kidney separately is absolutely essential. It is a well-known fact that operations carried out in any part of the urinary tract are attended by a mortality which is directly referable to diseased kidney function. For this reason, the necessity for testing the total renal function, or as it is often called, the combined renal function in these cases whenever considering operative interference, will become a recognized requirement. The differential diagnosis in cases of obscure abdominal disease can often be made and certainly assisted by the functional tests; also in cases of questions between renal and splenic tumors, or renal and hepatic enlargements, and cases of retroperitoneal inflammatory masses from appendiceal inflammations.

ASSOCIATION OF AMERICAN PHYSICIANS

Twenty-Sixth Annual Meeting, held at Atlantic City, N. J., May 9-10, 1911

(Continued from page 1681)

The Control of Epidemic Poliomyelitis

DR. SIMON FLEXNER and DR. PAUL F. CLARK, New York: At present the chief reliance must be placed on preventive methods, and these are to be based on accurate knowledge. It should be accepted as a fact that epidemic poliomyelitis is a contagious, infectious disease, the cause of which can enter the brain and spinal cord by way of the nasopharyngeal mucosa, and can, also, be eliminated from the nervous system by this membrane. Attention should be directed toward proper isolation of cases of epidemic poliomyelitis, to the disinfection of the nasal and buccal secretions, to the proper supervision of nurses and other healthy persons coming in contact with the ill, since such persons have been shown to be carriers of the infection, and to the recognition and control of the slight and abortive cases of the malady from which further extension may be feared. That insects may be passive carriers of the infectious agent we have recently proved in respect to contaminated flies. That an antiserum for the virus of poliomyelitis can be secured is now established, but thus far no antiserum has been prepared that is suitable for therapeutic use. We have ascertained that hexamethylene tetramin possesses a certain power of neutralization of the virus of poliomyelitis in monkeys, and we have further discovered that this power can be enhanced by chemical modification of this drug. Whether the problem of the treatment of the disease is to be solved along this line of investigation cannot, of course, be predicted, but the outlook is distinctly hopeful.

DISCUSSION

DR L. A. CONNER, New York: Have you any suggestions to make as to the preventive management of the nasopharyngeal mucous membrane?

DR. S. FLEXNER: I have assumed that the disease ought to be dealt with now in the manner with which we deal with epidemic cerebrospinal meningitis. We know a number of simple substances which are aseptic disinfectants for the virus. A very good one is menthol and hydrogen peroxid. I think it is a virus which is sufficiently readily injured by means of disinfectants which are mild enough to be employed, that, if you consider it a proper and safe measure to use disinfectant solutions in atomizers you could carry it out. We have great faith in cleanliness of the nose, of the hands and of the clothes. I mean by that to keep them free from the secretion. The virus has never been found in the secretions of the nose of human beings, but the number of observations is very small. It is extremely difficult to get secretions from the human nose. We have had the best specialist in New York help us to get the secretion from the nose and failed.

DR. F. P. KINNICUTT, New York: I would like to know the probability of the disease being contagious. Has Dr. Flexner any particular method of disinfection of clothing? Is it possible for any information to be given us in regard to the mode of using hexamethylene tetramin?

DR. S. FLEXNER: The problem of disinfection is not peculiar. I should deal with it as with any of the rather highly contagious diseases. The reason I have suppressed the precise information about these compounds is that we have probably thirty of them now under comparison and we are going to choose the best one and it would not be fair to say now which it is likely to be because we do not know, but the point is that it is a possible line of advance.

A Case of So-Called Leukanemia

DR. W. F. HAMILTON, Montreal: The patient, a farmer, aged 43, previously healthy, noticed a mass below the left costal border, which increased in size; he lost appetite, weight and strength and grew pale. Examination showed a spleen which reached down to Poupart's ligament; the liver was 2½ inches below the costal margin in the nipple line. There was no ascites nor glandular enlargement. The leukocytes numbered 5,600 and myelocytes were present. The polymorphonuclear cells were diminished, while the lymphocytes and large mononuclear cells were greatly increased in number. The hemoglobin was 65 per cent. and the red cells 3,150,000. Death occurred about 2½ years after onset. No autopsy was made. This case was really one of atypical leukemia. The term leukanemia might well be discarded.

DISCUSSION

DR. R. C. CABOT, Boston: What were the clinical features of the case aside from the blood?

DR. W. B. JAMES, New York: I wonder how many members feel perfectly satisfied with the recognition of such cases as this and those described as acute lymphatic leukemia as a distinct morbid entity? The term leukanemia implies the ordinary lymphatic leukemia.

DR. W. F. HAMILTON, Montreal: The clinical features were those of weakness, a slight pallor, no fever, moderately increased pulse-rate, no edema, an enormously large abdomen and a very greatly enlarged spleen over which one could feel to-and-fro movements. There was ascites, no pain or tenderness over the long bones. The peripheral lymph glands were not enlarged. The patient was in the hospital for four weeks and subject to *x*-rays and made little or no improvement.

The Possible Prevention of Pneumococcus Empyema by Hexamethylenamin

DR. FREDERICK C. SHATTUCK, Boston: The lethal action of hexamethylenamin on the typhoid bacillus in urine, the general permeation of the body by this drug and the general delicacy of the pneumococcus, suggested that possibly empyema might be wholly or partly prevented as a sequel of pneumonia by the routine administration of the drug. Thus it has been used for the past year in nearly all the cases of pneumonia in my service in the Massachusetts General Hospital and in some of those of my colleague, Dr. Gannett. The drug was given as soon as the diagnosis was established, in doses of 10 grains, three times a day and continued into convalescence. In only three out of fifty-nine of these cases empyema developed. During the same period forty-six patients were treated without hexamethylenamin, only one developing empyema. In the preceding year, of one hundred and forty-two cases of pneumonia without hexamethylenamin, in three empyema developed. Of thirty-four patients treated at the Johns Hopkins Hospital six developed empyema. Of thirty-five patients in the previous year without hexamethylenamin one developed empyema. At the Presbyterian Hospital in New York, of nineteen pneumonia patients taking hexamethylenamin, one had empyema. Of one hundred and ninety-three without the drug, five had empyema. These figures seem to show that this remedy is in no sense a preventive of empyema following pneumonia. Neither in the Massachusetts General nor the Presbyterian Hospitals did pericarditis develop in any case taking the drug, although it was noted in 4 to 5 per cent. at the Massachusetts and in 1.5 per cent. at the Presbyterian in those not taking the drug. Furthermore, the Mas-

sachusetts' records show that otitis media occurred in about 4 per cent. of the non-hexamethylenamin cases, in no instance in the hexamethylenamin series.

Renal Decapsulation in Chronic Bright's Disease

DR. JAMES TYSON, Philadelphia: A study of the four cases of nephritis treated by decapsulation shows that in no case was complete cure effected, notwithstanding the healthy appearance of the patients at certain times after operation. However, the operation is so serviceable in certain instances that it ought to be done more frequently. The conditions which demand it are stubborn persistence of symptoms causing great inconvenience or danger to life, such as permanent dropsy, uremia shown by convulsions or intense headache, anuria and large albuminuria. Operation should not be considered until medical treatment proves unavailing. It is also indicated in perinephritis. Contra-indications are an age of over 50, valvular heart disease with irregularity of action, extensive cardiovascular changes, or albuminuric retinitis.

(*To be continued*)

AMERICAN GASTRO-ENTEROLOGICAL ASSOCIATION

Fourteenth Annual Meeting held in Philadelphia, April 19-20, 1911

(*Concluded from page 1608*)

The Treatment of Gastric Disturbances

DR. J. KAUFMANN, New York: Treatment requires correct diagnosis. The progress made in the reading of gastric analyses assists in directing treatment along the right lines. Aside from properly interpreting disorders of gastric function, we have to consider their pathologic meaning. There must be a differentiation of primary and secondary gastric disturbances. Among the latter, those caused by chronic appendicitis, cholelithiasis, etc., are much emphasized at present. While undoubtedly occurring, their frequency is greatly over-rated; and too much importance is given to this special etiologic factor, at the cost of others that are known as provokers of gastric disturbances. Every etiologic factor should be taken into account. At the same time, the condition of the stomach proper requires consideration, even in cases of secondary gastric disturbances.

DR. JOHN A. LICHTY, Pittsburg, Pa.: Medical treatment is often instituted in cases of hyperchlorhydria and carried on for a long time, yet the patients still over-secrete, though they may improve so far as general health is concerned. Quite a number of these patients are improved or cured by surgical intervention, but there are still many that remain non-surgical and difficult to treat.

The Gastric Weak Line in Wounds of the Abdominal Wall

DR. ROBERT T. MORRIS, New York City: Failure of union of the abdominal-wall wound apparently means a trophic disturbance, and this incidentally corresponds to the area of superficial sensory disturbance described by Head for the gastric zone. It is probable that irritation of the nerves of the stomach, referred to their respective segments of the spinal cord, is continued as an impulse to the superficial gastric area, which is commonly irritated coincidently with irritative processes of the stomach. (This article will be published in THE JOURNAL.)

DISCUSSION

DR. J. C. HEMMETER, Baltimore: There are a great many presumptions in the hypothesis of Dr. Morris. We must first prove that the stimulus goes from the gastric zone to a segment of the cord from which this trophic nerve comes out.

DR. L. W. KAST, New York City: I consider the idea of Dr. Morris a very happy one. It does not prove anything, but it attracts attention again to the viscerocutaneous reflex, as well as to the mutual reflex association between internal organs and certain areas of the skin.

DR. S. J. MELTZER, New York City: I am surprised that the idea should not have suggested itself to Dr. Morris that the stimulus might not be a nervous but a chemical one. Surgeons experience that the stitches give way readily after operations on the bile-ducts, and it is possible that this may be not only due to bile, but also to pancreatic secretion.

DR. A. G. GERSTER, New York City: We face this problem, not only in the region of the epigastrium, but also in every other region of the body. I think that Dr. Meltzer's explanation has a great deal in it. Anesthesia alone is sufficient to disturb the pancreatic and gastric secretions so much that the entire chemical processes in the body are profoundly changed.

DR. R. T. MORRIS, New York City: The fact that repair did not take place in a case in which there was irritation of the pylorus led me to the conclusion that there was a trophic disturbance of that particular group of nerves running from a certain definite segment of the cord.

A Case of Banti's Disease

DR. J. FUHS, Brooklyn: This patient was successfully treated by splenectomy, afterward passing through an attack of typhoid and an operation for appendicitis. She had a typical, characteristic attack of typhoid, differing in no way from such attacks in patients not operated on, with the exception of the blood-findings, which showed a rather high leukocyte count for a case of typhoid, and a relatively high polymorphonuclear leukocytosis. The reaction to the surgical interference during the course of the typhoid did not present anything characteristic, and her recovery was as rapid as could be expected in a patient not splenectomized.

DISCUSSION

DR. J. C. HEMMETER, Baltimore: I, too, have a case of Banti's disease that has some very peculiar landmarks. This patient had profuse hemorrhage from the bowels, an ascites, a huge spleen, and cirrhosis of the liver. He has been operated on for appendicitis, and has had typhoid. The blood-picture in this case is typical of Banti's disease. Mallory has found in the portal veins of the liver typical splenic cells, which proliferate there almost like cancer cells. This is very striking evidence pointing to the fact that the spleen is really the starting point of the trouble, and not the liver.

DR. J. KAUFMANN, New York City: In a patient of mine some clinical facts pointed to the origin of the disease in the spleen. In all cases in which we can make out that the spleen is the primary seat of the disease, we should remove it. The blood-picture does not show anything typical. In our case, for instance, it was that of pernicious anemia.

DR. J. C. BLOODGOOD, Baltimore: I have had six cases of Banti's disease. In three of these, splenectomy was done. Two of those operated on are living, and all three of those not operated on. If we had removed the spleen in the latter cases, the operation would have been regarded as showing perfect results. The treatment given those not operated on was rest, with arsenic and iron.

DR. L. W. KAST, New York City: I believe it to be only a symptom-complex. The fact that it may be a syphilitic or a postsyphilitic condition should be borne in mind in making the diagnosis.

DR. J. FUHS, Brooklyn: Clinically, it is impossible to differentiate the symptom-complex of Banti's disease from cases in which, on examination of the spleen, tuberculosis or granulomata are found. I think that the hemorrhages and the blood-findings speak in favor of its being a toxemia. The Wassermann reaction was positive in two cases recently published.

The Relation of Symptoms to Pathologic Findings in Cancer and Ulcer of the Stomach

DR. J. C. BLOODGOOD, Baltimore: In a case of ptosis of the stomach and colon, the first case in which I resected for ptosis, medical treatment did not decrease the residuum in the stomach, which amounted to 200 c.c. I resected a little beyond the pylorus to a point that would make a straight line of the greater curvature and of the duodenum, suturing the duodenum to the stomach according to the method of Kocher, and then turning in the end. Resection of the stomach for ptosis is the simplest resection, because there are no adhesions. Things are so relaxed that there is very little shock. This patient had no postoperative complications after thirty-six hours. He has been relieved of the stasis of material in his stomach and colon,

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causing constipation, and the diarrhea is also over. The operation has been done ten weeks, and the man has gone back to his work.

Another case was one in which we suspected cancer of the pancreas. On exploring the abdomen, we found a small nodule on the head of the pancreas. There was a large gall-bladder; and in the common duct I could feel this nodule. It was not a stone. The operation performed was one that I had advocated two years before. I made the point that you should also resect the duodenum, because it is impossible to imagine a cancer of the diverticulum of Vater that would not infiltrate the duodenum. Local resections of the tumor itself have been done without any success, owing to the fact that the cancer has been cut through. In this case, in which there were clay-colored stools before operation, bile appeared with the first stool, and the patient is gaining in weight, showing that the loss of the pancreatic secretion is not incompatible with a gain in weight.

DISCUSSION

DR. J. KAUFMANN, New York City: If the operation in the first case was performed merely on account of the location and size of the stomach, I do not believe that these are sufficient indications for any operative procedure. Tonus is very important in cases of the neurasthenic type, the inborn weakness of the nervous system giving rise to atonic conditions. In such cases, stagnation may occur periodically, but disappear again. So long as there is no obstruction of the outlet, this condition does not require operative procedure.

DR. M. EINHORN, New York City: Gastroptosis, as such, is not at all important, and retention is almost never associated with it when it exists without any other condition at the pylorus.

DR. J. C. HEMMETER, Baltimore: S. A. Matthews has shown that removal of the duodenum is almost as fatal as removal of both kidneys.

DR. A. L. BENEDICT, Buffalo: The term gastroptosis does not mean a ptosis as the word is applied otherwise in pathology. It means that there is an atony or dropping down of the greater curvature. The word ptosis should be limited to the distinct dropping of a whole organ. A dilated stomach can be shrunk by methods of medical treatment.

DR. HENRY D. BEYEA, Philadelphia: In 1898 I devised an operation for gastroptosis. The procedure consists in simply shortening the normal ligaments. It is unassociated with danger, and is not mutilating.

DR. J. C. BLOODGOOD, Baltimore: The indication in this case was the fact that the patient had residuum. Extreme degrees of ptosis may be present without producing symptoms, and considerable symptoms may occur with but slight ptosis. My case was not one in which I should wish to try suture of the ligament alone.

Neuromuscular and Secretory Coordination Between Stomach and Duodenum

DR. J. C. HEMMETER, Baltimore: Secretion in the duodenum is not augmented by the presence of hydrochloric acid on the stomach side of the sphincter pylori. The hydrochloric acid or its derivatives must enter the duodenum. There is a periodic undulatory secretion of the intestinal juices in the fasting condition. Psychic secretion of pancreatic juice occurs in man. Jejune or fasting peristalsis (Pawlow and Boldyreff) occurs in the human being, probably as a means of evacuating products of excretion. This cannot be observed by the bismuth and *x*-ray method, because the digestive tract is not empty when bismuth is given. Observations on duodenal and ileocecal fistulas show it, however. There is a relation between the presence of bile and pancreatic juice in the fasting stomach to (a) disturbance of reciprocal intervention between the sphincter of Vater and the gall-bladder in enteroptosis, and (b) the normal jejune or fasting peristalsis of Pawlow and Boldyreff.

The Function of the Duodenum

DR. L. KAST, New York City: The bulbus duodeni frequently shows food retention, which can be seen on the fluoroscope, if bismuth is mixed with the food. The food-retention is often associated with altered peristalsis of the pyloric portion of the stomach, and is the explanation for a variety of subjective gastric symptoms. The duodenal food-retention has a diagnostic significance.

The Cause and Relief of Pain in Duodenal Ulcer

DR. JAMES T. PILCHER, Brooklyn: As the result of observations in 100 cases of ulcer of the duodenum that were diagnosed and the diagnosis confirmed by operation, and also of some experiments on dogs, I have reached the conclusion that ulcer of the duodenum reflexly excites a hyperacidity of the gastric juice; the maximum amount of secretion of hydrochloric acid in the stomach is due to a direct chemical action (hormones), and is at its height from one to four hours after meals; it passes into the duodenum as hydrochloric acid, there being no food four hours after meals for it to work on; and it does not excite a flow of the duodenal juice directly, and is not neutralized by the small amount present. The relief of pain in duodenal ulcer follows the ingestion of any substance into the stomach, which neutralizes the acid gastric juice. Food taken into the stomach excites at once a reflex secretion in the duodenum; the duodenal secretion is alkaline in approximately the same degree as the gastric juice is acid; and this secretion is of sufficient quantity and concentration to neutralize the hydrochloric acid of the gastric juice.

Six Cases of So-Called Larval Hyperacidity

DR. JULIUS FRIEDENWALD, Baltimore: In the larval hyperacidity, there is an actual hyperacidity, which is often not revealed; inasmuch as the gastric contents are not extracted early enough, for the secretion, which at an earlier period would present a hyperacidity, is gradually neutralized before the end of an hour when taking an Ewald test-breakfast. Observations over a series of six cases have been made. Test-meals were given, and removed at varying intervals; and while the percentage of free hydrochloric acid was normal and subnormal at the end of an hour, after an Ewald test-breakfast, yet it was found that there was a period in which a hyperchlorhydria was manifested.

Gastric Hypersecretion

DR. ARTHUR F. CHASE, New York: The results obtained from more than 200 tests throw light on the extent to which secretion is influenced by motility, and suggest that in cases of disordered motility the dry test-meal is a more accurate index of the secretory function of the stomach than is the wet. The rôle of fatigue in gastric function is important.

A New Test Breakfast

DR. DUDLEY ROBERTS, Brooklyn: This meal consists of lactose added to weak tea to the strength of 10 per cent. After the lapse of one hour, a portion of chyme is extracted, and water in known amount is added; and a second extraction is performed. By the Mathieu-Raymond formula, the total residue is calculated; and by the estimation of the lactose present, the amount of test-meal remaining is accurately determined. The estimation of the lactose in such a solution is simple. It would seem that the method, because of its simplicity and accuracy, might be worth general adoption.

The Benzidin Test for Occult Blood in Diseases of the Digestive Organs

DR. F. W. WHITE, Boston: The Schlesinger and Holst modifications of the benzidin test have been used in several hundred cases. I do not consider this test over-delicate, a large majority of negative results having been obtained. In feces, positive results were obtained only with ulcerative lesions of the gastro-intestinal tract and in hepatic cirrhosis. The benzidin test has many advantages over the guaiac test.

DISCUSSION

DR. ALBERT BERNHEIM, Philadelphia: Within the last few weeks, I have tried a new test with fluorescin, which acts in the same way as phenolphthalein, and is more delicate than the latter in some cases.

DR. DUDLEY ROBERTS, Brooklyn: I have come to the conclusion that positive findings are of great value in the benzidin

test, though negative findings indicate comparatively little. Several times I have been much confused because patients have taken hemoglobin preparations, and I now guard against that source of error with great care.

DR. J. FUHS, Brooklyn: In testing for blood in the stomach contents, I always test the saliva also for blood. If one adds benzidin to stomach-contents, it seems to have the property of liquefying mucus.

DR. A. S. BENEDICT, Buffalo: I have found several cases in which the occult blood in the feces came from a spot but 10 inches above the anus.

DR. F. W. WHITE: I think that both the positive and the negative findings have a good deal of value. If, in patients who have suspicious symptoms, I find no occult blood after they have had time to develop cancer, I consider this good evidence against the existence of malignant disease. Positive results in the feces mean a good deal more than the same results in stomach-contents.

Lymphocytosis in Certain Gastro-Intestinal Cases

DR. JOHN P. SAWYER, Cleveland, Ohio: In practically all my cases, for several years, a differential count has been made, and in the course of these observations I have often found the differential count of clinical advantage. A slight variation from the average lymphocyte-count is not of considerable moment; but when the count rises to 40 or 50 per cent. this is probably indicative of a considerable departure from the usual blood formation. These large lymphocyte counts are found without leukocytosis in a considerable number of diseases; among them, cases of gastro-intestinal disease. It occurs in cases in which gastro-intestinal catarrh is not discoverable by the test-meal or the stool; and in which the history shows no record of the existence of such catarrh recently. The condition of the gastric secretion seems to have no determining influence on this lymphocytosis. It is usually found in persons whose resistance is low. In such cases it is possible, by treatment of the patient, to bring about a very rapid and decisive change in this lymphocytosis. This treatment consists in the administration of iodid of iron for a few weeks and the exhibition of arsenic. This treatment brings about a prompt reduction in the lymphocyte-count, and the patients gain rapidly in weight and strength.

DISCUSSION

DR. S. T. MELTZER, New York City: I have come to the conclusion that there is a difference in the ferment between the leukocytes and the lymphocytes. One acts in alkaline, and the other in acid media; and I thought that there might be some sort of definite relation between certain conditions of acidity and lymphocytosis.

Is Pellagra a Disease Primarily of the Alimentary Tract?

DR. J. C. JOHNSON, Atlanta, Ga.: Gastro-intestinal symptoms are usually the first to appear in pellagra, and are in proportion to the gravity of the attack. There is an absence of hydrochloric acid in advanced cases; and in many, a lack of ferments. The patients were treated successfully with chlorid of potassium, tincture of iron, and essence of pepsin.

DISCUSSION

DR. S. J. MELTZER, New York City: The fact that the serious cases of pellagra had no hydrochloric acid, and that the cases that had hydrochloric acid had no serious symptoms, would indicate that the cause of the disease is of a kind that has to pass the stomach and that if hydrochloric acid is present in the stomach, it does not develop.

DR. A. S. BENEDICT, Buffalo: There is absolutely nothing specific or in the nature of an entity about pellagra. Cases of it are nothing but ordinary senility, insanity, skin-eruptions of various kinds, and all sorts of toxemias.

A Case of Voluntary and Intentional Regurgitation

DR. ALBERT BERNHEIM, Philadelphia: The patient can regurgitate food voluntarily and intentionally, whenever he desires to relieve symptoms of gastric distress. He usually takes a glass of water, to liquefy the contents of his stomach, so that they may come up easily; and also takes some bicarbonate of soda, so that the acidity of the regurgitated material may not injure the mucous membrane of the throat and mouth. He then bends over, so that the abdominal muscles compress the stomach. The esophageal opening of the stomach then dilates, and the food comes out.

DISCUSSION

DR. L. M. GOMPERTZ, New Haven, Conn.: I had a patient who was able to regurgitate his food. On one occasion, he had a complete case of reversed peristalsis, vomiting turpentine five minutes after it had been given by enema. He recovered from this attack without treatment.

Mitral Murmurs in Gall-Stone Disease

DR. DAVID RIESMAN, Philadelphia: In a number of cases of gall-stone disease, a mitral systolic murmur is audible during and shortly after an attack of colic. These murmurs are perplexing when the advisability of operative treatment is to be weighed. In all the cases seen, the murmur had not existed prior to the attack of colic. It is not due to endocarditis, for it disappears soon after the attack. It is not due to anemia, nor is it due to jaundice, for it can be heard in cases that do not have icterus. It probably depends on temporary dilatation of the heart. I believe that the chronic disease of the biliary tract, with its accompanying infection, causes a myocardial degeneration, somewhat analogous to that found in connection with fibroid tumors of the uterus. The degeneration predisposes the heart to dilatation when, during attacks of colic, the blood-pressure rises. The murmur is loud and unmistakable; the heart is enlarged, but not to any great degree. The murmur is no contraindication to surgical intervention. Indeed, if the pathogenesis is as stated, it constitutes a point in favor of operation. Care should, however, be taken with the anesthesia.

DISCUSSION

DR. S. J. MELTZER, New York City: It sometimes happens that there is a murmur in association with pain so excruciating as to lead one to believe it due to some trouble with the gall-bladder; while actually this pain is a symptom of angina pectoris. I have no doubt, however, that in Dr. Riesman's cases there was definite evidence of gall-stones.

DR. J. FUHS, Brooklyn: I have seen two cases of distinct biliary colic with asthmatic attacks in patients who had never had any asthmatic attacks before the attack of cholelithiasis, and never had one afterward. There was no functional or or organic disturbance of the circulatory organs either before or after the attack of gall-stones.

MEDICAL ASSOCIATION OF GEORGIA

Sixty-Second Annual Meeting, held at Rome, April 19-21, 1911

(*Concluded from page 1604*)

What Has Been Done in Georgia Against Hookworm Disease

DR. A. G. FORT, Lumpkin: The disease has been demonstrated as heavy in fifty counties, light in twenty-five counties and as only demonstrated in fifty-two counties. To ascertain what percentage of suspects really had the disease we watched quite a number of specimens and found that an average of 74.1 per cent. of the suspects were really infected. We believe that hookworm exists in every county in Georgia and expect to demonstrate it in a short time. In the eradication of this disease the enlistment of the physicians in the various sections of the state is indispensable, next is the cooperation of the people so that they will present themselves for treatment, and finally finding means for the treatment of the indigent. We depend on the physicians of the state to treat the hookworm disease. We have sent to each physician bulletins on hookworm disease and we have also sent letters to each physician in the state. We have appeared wherever it was practical before the district and county societies, and our inspectors have visited hundreds of physicians personally making an effort wherever possible to enter into the technic of the examination

by means of the microscope. We have endeavored to get the cooperation of the people by giving lectures, by talking to parents whose children present evidence of infection, by giving talks to school children and by notifying each parent whose child is suspected of being infected and by sending to the parent bulletins stating the cause, nature and prevention of the disease, and the methods to be followed in securing a cure. In every section we have endeavored to see that a few typical cases have been treated in order that they might be an object lesson. As another means of getting the cooperation of the people we have used the press, having visited 102 editors and secured for publication 169 articles. The matter of providing treatment for the indigent is a perplexing question. The final task in the work of eradication is the stopping of soil pollution. This is a work of education and will require a great length of time. About 83 per cent. of the people in the state of Georgia live in the country and soil pollution is generally practiced, with no thought of the serious consequences. Outside of the cities and towns a large percentage of the people have no privies at all. The farmers are beginning to realize their importance and are asking for plans and specifications.

We have during the last twelve months visited seventy-five counties, examined 419 schools with an attendance of about 40,000 and found about 10,000 suspects. We have made 4,472 microscopic examinations and found 2,205 positive. We have reported as treated about 10,898 persons. We have delivered 400 lectures, many of them illustrated.

A Simple Technic in Gynecologic and Obstetric Perineal Repair

DR. R. R. KIME, Atlanta: By the buried suture the principles of the Emmet operation can be carried out equally as well if not better than in the denuding process and by a far simpler and quicker technic. I have been advocating this method of perineal repair for fifteen or twenty years. The longer I practice it the more I am convinced of its utility, efficiency and simplicity. If the flap is properly elevated, either or both vaginal sulci, anterior fibers of levator ani, pelvic fascia, sphincter ani, when lacerated, and the perineal structures proper can be approximated forming a good firm pelvic floor and as large a perineal body as is desired without destruction of tissue, which is a factor of importance in many cases. Scar tissue should be removed. It is best to conserve the vaginal tissue, especially if the patient is likely to have more children. The flap protects the sutures, lessens chances of infection and prevents the formation of pockets in vaginal sulci, lessens collection of lint from dressings; if infection does occur superficial stitches can be removed without complete separation of the parts. In obstetric work the same principles apply except that the parts are already denuded for suturing. All that is needed for the operation is a needle holder or artery forceps, scissors, No. 2 plain catgut and a small, full curved needle with a large eye. This method does not require an expert anatomist for hairsplitting dissections of the various individual muscles of the perineum.

DISCUSSION

DR. W. W. BATTEY, JR., Augusta: In all operations for the repair of the perineum we must have in view two facts, the necessity for support for the pelvic floor and for the rectocele. The operation employed by Dr. J. Riddle Goffe of New York is one of the best we can use. The repair can be accomplished in about fifteen minutes and the technic is very simple. The post-operative care of these patients is of as much importance as the operation itself.

DR. J. R. B. BRANCH, Macon: With regard to the post-operative care of these patients, they are left, as a rule, in the hands of a nurse and the ultimate success of the operation remains in her hands. One question that arises is whether to use a catheter or not. If the nurse cleans the perineum, dusts it over with aristol (thymol iodid), and then catheterizes the patient, the sutures may hold well. It is better, however, in many instances not to institute catheterization until we are sure that the sutures will hold. The bowels should be thoroughly cleansed out before operation and then a low diet given. The best results are then obtained by tying up the bowel. These patients do not need much nourishment. The bowels should be moved on the eighth, ninth or tenth day by means of an olive oil suppository, which should be given through the retention catheter. This catheter should have been introduced into the bowel, sutured there, to permit of the escape of gas.

DR. R. R. KIME, Atlanta: I wish to emphasize the importance of using the buried suture in these cases. I have never been able to get successful results otherwise. The suture should be one that is absorbable. If the knot is left in the rectum there are chances of infection from the rectum and this can be avoided by the method that I propose.

Tuberculosis Among Insane Negro Women

DR. N. P. WALKER, Milledgeville: These 265 cases do not represent selected cases and the period of observation extends over five and one-half years. Within the past five years the sanitarium has received 4,496 patients of whom more than 90 per cent. were between the ages of fifteen and ninety. For the registration area it is stated that 84 per cent. of people dying of the disease succumb between the ages of fifteen and seventy. In a sane community only about 61 per cent. are within these limits. One of the chief local etiologic factors is the crowded conditions of the wards. The normal capacity of the main building for negro women is 310 and the average number accommodated is 420. Note was made of the sleeping quarters of seventy-four consecutive patients in 1906-1907 and it was found that the percentage was 130 per cent. higher among the patients from the dormitories than from regular rooms, and 170 per cent. higher among those sleeping in the day rooms. There are many difficulties in making an early diagnosis of tuberculosis among the insane. Many do not complain at all and it is quite impossible to obtain a reliable history, especially among the negroes. There were thirty-three cases of acute miliary and general tuberculosis, forty-four in the third stage of pulmonary tuberculosis, 123 in the second stage and fifty in the third stage. There was one case of polyserositis, two of enteric fever, five of adenitis and seven of pleurisy with effusion. There were many forms of complications presented. The treatment presented many obstacles. Many were indifferent to instructions and it is almost impossible to secure systematic regulation of rest and exercise. The open air treatment was begun in 1905. As for mortality, of the thirty-three cases of miliary and general, two with enteric and one of polyserositis, all died. Of five patients with adenitis, four improved and one died of other disease. Of seven with pleurisy with effusion, five recovered, one improved and one died of intercurrent disease. Of those with chronic tuberculosis in the third stage, thirty-seven died, six were furloughed not improved and arrest took place in one. Of 123 in the second stage, twenty-one were cured, twenty-six arrested and forty-one died. Of fifty patients in the first stage, twelve were cured, sixteen arrested. The influence of isolation and treatment on the death rate among colored women has been gratifying. In 1905 the ratio was 9,317 per 100,000; in 1906, 6,677, in 1910, 2,936 or one-third the rate of 1905.

The Colon Bacillus as the Principal Cause of Abdominal Diseases

DR. FENTON B. TURCK, Chicago: The virulency of the colon bacillus is now quite generally recognized. The degree of virulency can be determined by cultures taken from the ileum or cecum and fed to rats. Immunity, or partial immunity, can be established by the use of vaccines. Where the thyroid gland is deficient, the giving of thyroid extract will reduce the virulency. The symptoms are variable in different patients. The cultures taken from the lower ileum or cecum were taken from an area of the greatest bacterial activity. One-half to one cubic centimeter of a bouillon culture of non-virulent *B. coli* can be injected into the peritoneum of the rat without any marked effect, but if the virulency is well marked, death will follow. In the treatment of such diseases one should reduce the virulency of the *B. coli;* he should restore the stomach and intestines to their normal condition; by hygienic living, proper diet, etc., he should guard against recurrences. If the retention was of long standing, and the correction of dietetic errors and hygienic living, drugs, etc., do not avail, surgical means are required. This, however, only removes the effect and not the cause, and after-treatment is necessary to

remove the causal factors. Lavage of the stomach with a weak solution of silver nitrate is necessary. Heat stimulation (hot water introduced into the stomach) is very beneficial to create antibodies and restore the muscle to functional activity. Lavage of the colon with water and air will excite peristalsis and act as pneumatic gymnastic exercise of the muscle wall of the colon. Liquid petrolatum enemas are of great value in cases of constipation. Some have recommended the use of *B. bulgaricus* as antagonistic to the *B. coli*, but others maintain it has no effect when taken with a mixed diet.

The injection of vaccines is of the greatest value. The cultures should not be taken from the ileum or cecum, as there the strain is most virulent. The cultures are injected into a dead fetal pig and grown in a serum pressed out from the fetal pig. In acute cases small injections are taken from three to five days apart; in the chronic cases larger doses are given but farther apart. In many cases where the mechanical physical means and vaccine and serum treatment are all negative, the use of the thyroid substance will be beneficial. Laxatives and purgatives are valuable for expelling the accumulated material from the bowel, but are of no permanent value. Those drugs which have the least irritating effect should be used. Antiseptics of all forms have little value, as they seem to increase the virulency of the *B. coli*. A few of the oxidizing agents, such as substances containing magnesia or iodin compounds, containing free oxygen that can be liberated, will promptly excite the antibodies in the blood. The diet regulates the bacterial contents of the intestines. Frequent changing of the chemical nature of the diet will prevent the establishment of any one type of bacteria in the intestines. The frequency of meals is of great importance. In many more time is required, because of the slow movement to clear the alimentary tract and give time for rest. Meat increases intestinal intoxication and should not be eaten oftener than once a day. Rice is one of the most easily digested foods, and least toxic in effect. It may be combined with extract free meat, into an easily digested, nutritious and inviting dish. Carrots, beets, parsnips, raw cabbage, celery, raw tomatoes, apples, are all good and may be used in various combinations. Irish moss and agar agar, cooked into a jelly and flavored, will do much to reduce the virulency of the *B. coli*. Lavage of the stomach and colon will notably have a beneficial effect but will produce changes in the chemistry of the blood. Hot baths have a like effect, but to a less degree. Exercise is an essential part of the treatment to be adopted in combating constipation.

Drinking Water with Meals

DR. GEORGE M. NILES, Atlanta: There is a widespread idea that the habit of imbibing water or any other fluid as food is harmful. I believe it to be based on erroneous physiologic conclusions and promulgated more by tradition than by painstaking observation. Water does not to any extent permeate a mixed meal in the stomach and consequently cannot dilute or interfere with the potency of the gastric juice. Much water at meals is contra-indicated in gastroptosis, in patients with weak hearts or uncompensated valvular lesions, occasionally where there is a marked tendency to colic or spasm of the pylorus. Copious draughts of ice-water gulped down during fatigue or profuse perspiration are both unhygienic and dangerous. A large percentage of patients coming under my notice for poor nutrition, constipation, intestinal auto-intoxication and numerous other states of disordered digestion are those who drink no water with their meals, or very little. I enlisted the aid of sixteen young men of good physique and good digestion, each one accustomed to drinking one or two glasses of water with his meals. Eight of these young men were instructed to drink no water with meals, and only what was demanded to satisfy thirst between meals for a week. The other eight were instructed to drink four glasses of water with each meal and between meals to drink it as was desired. Of the eight who drank no water, all lost in weight, from eight ounces to two pounds, with one exception, and he remained at exactly the same weight as before. Each one complained of headache and more or less constipation. The eight who drank four glasses at a meal fared much better. All gained in weight from four ounces to two and one quarter pounds, except one, whose weight remained the same. Not one had headache, constipation or any digestive discomfort. The one who was constipated at the beginning found his bowels more regular.

DISCUSSION

DR. E. C. THRASH, Atlanta: It has been my policy to curb thirst during meals, but otherwise to drink when inclined to do so. Drinking too much water is detrimental, and drinking too little water is also detrimental. It is better to drink the quantity of water that the system demands and not to go to extremes.

DR. T. J. MCARTHUR, Cordele: I feel sure that many people suffer from indigestion, supposedly the result of kidney trouble, when the real cause is a lack of a sufficient water supply to the system. My personal observation has been that it is not an advantage to take too much water with meals. I think the happy medium is to be found in taking two glasses of water with meals. One should insist on a definite quantity of water being taken during the twenty-four hours. We should not force the amount of fluid beyond the demand. Some people get the idea that water is unhealthful, and drink but small quantities of it. If they drank more and diluted the contents of the alimentary canal more frequently there would be less absorption of toxins.

DR. J. R. B. BRANCH, Macon: It makes a difference whether liquids are taken in the beginning or at the close of a meal. The saliva plays a very important part in carbohydrate metabolism. If one chews his food thoroughly, he obtains the proper secretion of saliva; if a moderate amount of water is taken at this time no harm will result, but if large quantities are taken or the food is washed down with fluid the proper digestion of the carbohydrates is interfered with.

DR. S. A. VISANSKA, Atlanta: One of the greatest arguments to my mind in favor of taking water with meals is that an infant artificially fed must have its milk diluted with water to the same degree as the mother's milk is. In infants we seldom find kidney troubles; the water seems to flush out the kidneys. So far as my experience goes, the taking of water with meals is beneficial rather than harmful.

Bacillus-Carriers and Their Relation to Public Health

DR. K. R. COLLINS, Atlanta: Carriers may be divided into three classes: (1) Permanent carriers; this class is confined to such persons as have never had the disease which is produced by the organism for which they act as host. (2) Temporary carriers; those who come in close contact with a patient suffering with an infectious disease and acquire temporarily the organism related to the disease. (3) Persons convalescent from certain diseases who continue after complete recovery to maintain the organism causing the disease for varying periods of time. Among convalescents individuals have been found who carry the active bacilli anywhere from a few days to 669 days after the disappearance of the membrane in diphtheria. Convalescents from typhoid may carry the organism from a few weeks to twelve to eighteen months after their recovery. Such convalescents may be responsible for some outbreaks of typhoid in schools and colleges. We have no accurate knowledge regarding contacts in typhoid as we have in diphtheria, but it is quite possible for an individual to acquire temporarily the organism and to become a means of transmitting the disease. Several cases of permanent carriers of typhoid fever have been reported as "Typhoid Mary," reported by Dr. Soper of New York City. There are other diseases carried in the same way as has been demonstrated in a case of cerebrospinal meningitis. It would seem advisable in cases of epidemics of various infectious diseases to consider the possibility of human carriers and to give careful instructions to those recovering from these diseases as to how to protect others.

DISCUSSION

DR. J. C. BLOOMFIELD, Athens: The question of bacillus carriers is a very important one with health officers especially. My experience has been that people are willing to do what is right if they understand the reason. Mild cases of diphtheria, where the patient is not very ill, are the ones that make the trouble, as it is sometimes very difficult to make

people understand that such cases are dangerous. In our town there is a milk district with 200 to 250 inhabitants which furnishes one-third of all the cases of typhoid in the city; this district is supplied with the same water as the other parts of the city, and I am convinced that there is a typhoid carrier in that locality. They are careless here about their hygienic surroundings and every year typhoid appears in April and continues until December. In cases of diphtheria, every child in the school-room which was occupied by the patient should have a culture taken. In the city of Athens we have an ordinance that no child who has a sore throat for twenty-four hours can return to school until a culture has been taken and declared free. Many children without membranes give positive cultures.

DR. J. C. BENNETT, Jefferson: If we suppress the carriers of disease, contagious diseases can be stamped out.

DR. J. R. BRANCH, Macon: In typhoid it is well known that the patient harbors the bacilli and scatters them through the urine and feces. At the end of convalescence the urine and bile can be sterilized absolutely by the administration of hexamethylenamin, 5 grains three times a day. It would be a good idea to have the urine and feces examined before the patient is discharged.

DR. R. R. DALY, Atlanta: It is the physicians duty to educate the people in regard to these bacillus-carriers. I know a family of five children who had diphtheria and all were carriers, and yet the father refused to understand that they were dangerous and did not isolate them.

Diseases of the Mouth

DR. ROBIN ADAIR, Atlanta: The neglect of this subject often results in loss of masticating surface, part of a jaw or the death of the patient. Growths in the mouth are often of dental origin, and the custom of treating these cases with drugs is to be condemned. When examining a patient, extend your observations to the gums. The local surgical treatment is the work of a dentist. Fortunes are spent to attempt to cure tuberculous patients, who reinfect themselves every time food, medicine or saliva pass over their diseased cavities and gums. Many so-called throat, eye, stomach, intestinal, liver and kidney troubles are due to a diseased mouth and medical treatment cannot cure them. The mouth must have attention. Many mouths which were in good condition before an illness soon after convalescence develop disease of the gums; this is because the physician has not given proper care to this organ while the patient was under his care. The patient is apt during illness to lose the cleansing advantages and the mouth becomes a culture tube for bacteria.

DISCUSSION

DR. GEORGE N. NILES, Atlanta: In treating cases of gastro-intestinal disease, whether in the adult or the child, one should never neglect the condition of the mouth. The alimentary canal cannot be kept clean unless the mouth is clean.

DR. R. R. DALY, Atlanta: The antituberculosis society found some time ago that it was not getting the results that it wanted and tried to learn the cause. Dr. Adair was consulted on the subject and he pointed out one reason, the lack of proper care of the mouth. After the society had obtained the services of dentists to work on the teeth of these unfortunates, remarkable results were obtained. Mouth contamination interferes with proper digestion, and it also causes sore throat and other conditions that improve when the teeth are cleansed.

DR. E. C. CARTLEDGE, Atlanta: At the hospital it is the custom to always clean the teeth of the patient before giving the anesthetic. The germs of pneumonia are always present in the lungs and unless these germs are gotten rid of before the operation pneumonia is likely to occur. This point is too frequently overlooked. I never have a patient consult me unless I first examine his mouth.

DR. S. A. VISANSKA, Atlanta: The time to begin oral hygiene is in infancy. It would be a good idea if the society would elaborate on the lines brought out in this paper and especially in regard to the spreading of contagious diseases because of the lack of proper oral hygiene.

A Plea for the Isolation of the Criminal Insane

DR. W. A. ELLISON, Milledgeville: It is my observation that the natural instinct of the criminal is to exercise a malicious influence over his fellow associates, creating disturbances and demoralizing the law and order of things, and if possible inciting insurrection. Worst of all, the criminal hinders the favorable prognosis of the common insane. I plead for a better court of commitment, one that should eliminate the ten days' notice and treat one with a diseased mind rather as a sick man than as a criminal. The shameless exhibition of insanity pushed as a mode of defense in crime and followed soon after commitment by the indignant efforts of the accused to be adjudged sane should make us more cautious, and the erection of colonies for the criminal insane would lessen the number of such pleas on the side of the criminal. In regard to the study of criminology as associated with insanity we may devide it into two classes; insanity as a culminative factor in the production of crime and crime as a culminative factor in the production of insanity. My idea of a colony for the criminal insane is a colony for the insane under the management of a separate board of trustees, or directly under the management of the prison commission, on an area sufficiently large, whereby the able-bodied can be put to work, to develop their bodies and possibly their minds. As physicians we should urge on the state the isolation of this class.

DISCUSSION

DR. R. R. DALY, Atlanta: There is something peculiar about the criminal insane which differs from what is found in the ordinary case of insanity. The fear of personal harm in these institutions greatly interferes with the work of the doctor, and in Matteawan, N. Y., the doctor always has a personal attendant who does nothing but stand behind. This interferes with the work of the doctor in cases of men who are not criminally insane.

DR. W. A. ELLISON, Milledgeville: Physicians should be given an opportunity to examine the patients suspected of being criminally insane in order to determine the character of their insanity. The proper treatment of these cases should not be interfered with in the courts. While the physician should always be on guard when brought into contact with these patients, he should not be in great fear of personal injury.

A State Journal

The society voted to establish a state journal, owned and controlled by the society and edited by the secretary, Dr. W. C. Lyle, Augusta.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Archives of Internal Medicine, Chicago

May

1 Oriental Sore in Panama. S. T. Darling, Ancon, C. Z.
2 *Use of Blood Charcoal as Clearing Agent for Urine Containing Glucose. R. T. Woodyatt and H. F. Helmholz, Chicago.
3 *Chlorid and Water Tolerance in Nephritis. K. M. Vogel, New York.
4 *Studies on Water-Drinking. W. M. Hattrem and P. B. Hawk, Urbana.
5 Determination of the Catalytic Activity of the Blood as a Clinical Diagnostic Method. M. C. Winternitz, G. R. Henry and F. McPhedran, Baltimore.
6 *Study of the Internal Function of the Pancreas in Carbohydrate Metabolism. J. H. Pratt and L. H. Spooner, Boston.
7 Tuberculous Retroperitoneal Adenitis Connecting by a Sinus with the Duodenum. M. Lincoln, Worcester, Mass.
8 *Case of Synchronous Cardiac and Respiratory Rate. G. W. Norris, Philadelphia.
9 *The Utilization of Fats and Oils Given Subcutaneously. L. H. Mills, New York.

2. **Blood Charcoal.**—The authors advise that, before any conclusions be drawn from measurements made by the Bang and Bohmannsson method, the individual sample of charcoal which is used shall be thoroughly tested in control experiments.

3. **Chlorid and Water Tolerance in Nephritis.**—Vogel emphasizes that the manner in which the kidney deals with known amounts of sodium chlorid and water furnishes, at least in some measure, an index of its functional capacity in general

and aids in establishing the anatomic diagnosis. It is, therefore, apparent, that whatever may be thought of the salt-poor diet as a routine mode of treatment, the indications to be gained from a study of the chlorid and water intake and output are sufficiently valuable to render it advisable to make such determinations in beginning the treatment in every case of nephritis that is at all severe.

4. **Water Drinking.**—The observations made by Hattrem and Hawk showed that the drinking of copious (1,000 c.c.) or moderate (500 c.c.) volumes of water with meals decreased intestinal putrefaction as measured by the urinary indican output. Copious water-drinking caused a more pronounced lessening of the putrefactive processes than did the moderate water-drinking. In copious water-drinking the total ethereal sulphate output was increased coincidently with the decrease in the indican output. This observation furnishes strong evidence in favor of the view that indican has an origin different from that of the other ethereal sulphates, and that they cannot correctly be considered as indexes of the same metabolic process. When Ellinger's method is employed, the authors say that the determination of indican should be made on fresh urine before any preservative has been introduced. Especially is this true when thymol is used as the preservative. The decreased intestinal putrefaction brought about through the ingestion of moderate or copious quantities of water at meal time is probably due to a diminution of the activity of indol-forming bacteria following the accelerated absorption of the products of protein digestion, and the passage of excessive amounts of strongly acid chyme into the intestine.

6. **Internal Function of Pancreas in Carbohydrate Metabolism.**—The authors found that there is a rapid decrease in the power to assimilate glucose after the onset of atrophy of the pancreas. The persistence of a low limit of assimilation for more than a year shows that the other organs of the body compensated imperfectly, if at all, for the pancreatic insufficiency. Diabetes did not develop in any animal, although in two the atrophy and sclerosis of the pancreas were extreme. It cannot be denied that the retained ability to consume sugar in animals with the pancreas almost totally sclerosed was possibly due to some compensating action elsewhere in the organism. The limit of assimilation in a dog with atrophy f the pancreas which had been under observation fourteen months was increased more than 100 per cent. by feeding fresh pancreas.

8. **Synchronous Cardiac and Respiratory Rate.**—The respirations in Norris' patient were very rapid, but the pulse-rate very slow. The pulse-rate and the respiratory rate were absolutely synchronous, 72 per minute. This condition persisted for about twenty-four hours, during which time the cardiac and respiratory rate remained absolutely synchronous.

9. **Utilization of Fats and Oils Given Subcutaneously.**—Mills' experiments have shown that olive, peanut, cocoanut, sesame, cotton-seed, lard oils, unsalted butter-fat and lard may be given hypodermically and over a considerable period without local irritation, provided aseptic care is used, and no constitutional disturbance occurs, provided precautions are used to prevent injection into the blood-stream. Emulsions of these oils made with 3 to 5 per cent. of egg lecithin and water are permanent, and cause no irritation if given subcutaneously. Oils and fats given subcutaneously are absorbed by means of the lymphatic system and eventually reach the thoracic duct. Lymphatic vessels and glands in contact with and transmitting oil for any length of time become hypertrophied and are thus better able to carry oil. The amount of absorption of plain oil from the subcutaneous tissues after injection during starvation is so small as to be negligible. Emulsified oils and fats injected during starvation are absorbed in amounts sufficient to furnish from one-half to two-thirds of the full calorific requirement of the animals injected. Oils and fats so injected and absorbed have no more influence on the destruction of protein in starvation than has fat given alone by mouth. Plain oils injected subcutaneously under conditions of low protein ingestion are little, if any, better absorbed than when similarly given during starvation. Emulsified oils injected under these conditions are absorbed quite as well as similar oils given to starving animals. Plain and emulsified oils are absorbed about equally well when the animals injected are given a plentiful supply of protein in their food. This probably furnishes the large quantity of lipolytic enzymes necessary for body action on plain oil. The injection of oils subjected to lipolysis causes death, which is due apparently to the production of oleic or other acids with the possible formation of toxic quantities of soaps. Oil absorbed from the tissues after subcutaneous injection is (a) burned in the body for the production of heat and energy, thus sparing the body fat; (b) retained as such within the organism; or (c) possibly converted into body fat by reconstruction in the liver, from which it may be sent for storage to the various fat depositories, after which it is drawn on as needed. Proof of this last proposition is lacking. It seems likely, from comparative examination of the iodin indices of the ether extracts of visceral and adipose tissue that the actively functioning viscera use oil and fat absorbed after subcutaneous injection for the direct performance of their functions, and that the storage of the foreign fat given in excess of the nutritive requirement takes place principally in the subcutaneous tissue, liver and lungs, to a small extent in the kidneys and spleen, while the pancreas and stomach and intestines are practically uninfluenced. This demonstration that after injection under suitable conditions oils can be absorbed to an amount capable of covering so large a proportion of the calorific requirement suggests the application of such injections to the treatment of wasting diseases, to the cachectic conditions associated with imperfect metabolic processes, and especially to tuberculosis, in which the intolerance to fats is almost symptomatic.

Buffalo Medical Journal

May

10 Pellagra in Buffalo. G. W. Wende, Buffalo.
11 A Plea for Hospital Delivery of Our Maternity Patients. L. Schroeter, Buffalo.
12 Fiftieth Anniversary of the Graduation of Drs. Clawson and Smith. C. G. Stockton, Buffalo.

New York State Journal of Medicine

May

13 *Medical Teaching and State Boards of Medical Examiners. C. Stover, New York.
14 Venesection and Saline Infusion in Pneumonia. J. S. Waterman, Brooklyn, N. Y.
15 *An Improved Method for the Extraction of the Immature Cataractous Lens. H. E. Smith, Norwich, N. Y.
16 Early Functional Danger Signals in Abdominal Disease. R. S. Fowler, Brooklyn, N. Y.

13. Abstracted in THE JOURNAL, May 6, 1911, p. 1351.

15. **Extraction of the Cataractous Lens.**—The operation described by Smith differs in two particulars from the usual extraction operation. Taking a firm and deep grasp with the fixation forceps on the conjunctiva just below the insertion of the internal rectus muscle, a knife with a blade the shape of a miniature scalpel is thrust through the cornea about the middle of the supero-temporal quadrant and the blade carried down to the lower edge of the dilated pupil, its edge being toward the operator. The handle is then made to describe the arc of a circle away from the surgeon, and a cut is made through the capsule up to the upper limit of the pupil, the blade, then slightly withdrawn, is carried over to the inner side of the mid-pupillary space, the same maneuver repeated and a cut made in the capsule at right angles to the first. The blade is then turned into the same plane as its entrance and is withdrawn. If for the left eye the operator stands on the left side of the patient, the fixation is just above the internal rectus and the knife entered into the infero-temporal quadrant, the cut in the capsule then begins at the upper limit of the pupil. The procedure otherwise is the same. After the capsulotomy the conjunctival sac is flushed with an antiseptic lotion, the patient given a hypodermic of ¼ grain morphin and put to bed. He is allowed to remain there from four to six hours before the extraction proper is performed. This does not differ from the ordinary method, but the corneal section should be ample, for most immature cataractous lenses are large. The period of waiting and the method of capsulotomy are the two essentials of this operation. During the waiting period the capsule, having been amply divided, curls away

from the cortex and allows the aqueous to insinuate itself between this and what remains of the enveloping capsule, causing a separation between the two. That this is true is seen by the ease with which the later delivery of the lens is always accomplished, and its clean, full and smooth outlines when it does come out.

Medical Herald, St. Joseph

May

17 *Present Status of Salvarsan. A. Schalek, Omaha, Neb.
18 *Suggestions for the Application of Lactic Ferments in Genito-Urinary Work. F. S. Mason, New York.
19 *Difficulties Encountered in Late Operations for Intestinal Obstruction. H. E. Pearse, Kansas City, Mo.

17, 18 and 19. Abstracted in THE JOURNAL, April 15, 1911, pp. 1140 and 1141.

Journal of Biologic Chemistry, Baltimore

May

20 Refractive Indices of Solutions of Certain Proteids. Gliadin. T. B. Robertson and J. E. Greaves, San Francisco.
21 Method for Quantitative Determination of Aliphatic Amino Groups. D. D. Van Slyke, New York.
22 Quantitative Determination of Prolin Obtained by the Ester Method in Protein Hydrolysis. Prolin Content of Casein. D. D. Van Slyke, New York.
23 Digestion of Protein in the Stomach and Intestine of the Dog-fish. D. D. Van Slyke and G. F. White, New York.
24 Relation Between the Digestibility and the Retention of Ingested Proteins. D. D. Van Slyke and G. F. White, New York.
25 *Increase in Metabolism Due to the Work of Typewriting. T. M. Carpenter, Boston.
26 Pentosans in Lower Fungi. A. W. Dox and R. E. Neidig, Ames, Iowa.
27 Factors Influencing the Quantitative Determination of Gliadin. J. E. Greaves, San Francisco.
28 Composition of Certain Substances Produced by the Action of Pepsin on the Products of the Complete Peptic Hydrolysis of Casein. T. B. Robertson and H. C. Biddle, San Francisco.
29 Theory of the Mode of Action of Inorganic Salts on Proteins in Solution. T. B. Robertson, San Francisco.
30 Relationship Between Urea and Ammonium Salts. A. J. Wakeman and H. D. Dakin, New York.
31 Formic Acid as an Intermediary Substance in the Catabolism of Fatty Acids and Other Substances. H. D. Dakin and A. J. Wakeman, New York.
32 Sulphur in Proteins. T. B. Johnson and G. Burnham, New Haven, Conn.
33 Hydrolysis of Casein. T. B. Osborne and H. H. Guest, Connecticut.

25. **Increase in Metabolism Due to Typewriting.**—Carpenter found that the rate of from fifty-seven to 115 words per minute resulted in an increase in the pulse-rate from 90 to 120, and in the respiration per minute from 19 to 30. There was also an increase in the body temperature, although it is evident that the total rise was not satisfactorily measured in these experiments. The work of typewriting at the rates reported in his experiments resulted in an increase of 30 to 70 per cent. in the total metabolism above the resting metabolism, or an average of about 50 per cent. The amount of increased energy above the resting metabolism per 1,000 words was on the average about 7 calories, and the increase in both the carbon dioxid and the oxygen was 2.5 grams. The increase in carbon dioxid and oxygen due to 1,000 strokes on a typewriter was 0.57 and 0.54 grams, respectively, and about 1.6 calories increase in energy output. The measure of metabolism by periods during the work of typewriting shows that there was a gradual decrease in the amount of energy required per 1,000 strokes. This was more marked in the individuals whose hands and fingers became extremely tired, which would indicate that during fatigue, work is accomplished more economically. The average equivalent amount of work calculated from the increase in metabolism in these experiments varied from 1,950 to 4,600 kilogrammeters per hour, and the calculation based on these results gave an average of 145 kilogrammeters per 1,000 strokes of typewriting. The variation in the increase in metabolism due to the work of typewriting in these different individuals is considered to be due to differences in individual facility and technic. The female subjects represented the extremes in these experiments.

Lancet-Clinic, Cincinnati

May 20

34 *Preparation Required for the Practice of General Surgery. G. W. Green, Chicago.
35 Insanity and Allied Conditions. I. O. Allen, Richmond, Ind.
36 Myositis Ossificans. S. Lange, Cincinnati.
37 Cincinnati's Tuberculosis Problem and Some Suggestions for Its Solution. W. H. Streitmann, Cincinnati.

34. Abstracted in THE JOURNAL, Sept. 24, 1910, p. 1134.

American Journal of Orthopedic Surgery, Philadelphia

May

38 *Treatment of Congenital Talipes Equinovarus in Infancy and Early Childhood. R. E. Soule, New York.
39 *Artificial Impaction in Hip Fractures. F. J. Cotton, Boston.
40 A Scheme for Determining the Correct Relative Position of the Joint of an Apparatus to the Anatomic Joint. J. J. Nutt, New York.
41 A Case of Tubercular Osteomyelitis of the Extremity of the Femur Resembling Infantile Scurvy. S. M. Cone, Baltimore.
42 *Muscular Weakness and Pain. E. H. Bradford, Boston.
43 A Case of Congenital Elevation of the Scapula. P. Le Breton, Buffalo.
44 The Plaster Swathe. R. Soutter, Boston.
45 A Rolling Bench for Use After the Reduction of Congenital Luxation of the Hips. G. G. Davis, Philadelphia.
46 Anatomic Anomaly Causing Symptoms of Broken Arch. F. J. Cotton and H. F. Day, Boston.
47 An Instrument for Shortening Tendons. A. O'Reilly, St. Louis.

38. **Congenital Talipes Equinovarus in Infancy.**—Soule emphasizes particularly that the earlier begun and the more continuous the treatment, the less likelihood of having to resort to braces at a later period. He says that the inward rotation of the tibia on its long axis is usually found in cases which have been allowed to continue into early childhood before attempting correction of the club-foot. Knock-knees is also a later development found in the walking period. It is emphasized that no case should be left to the nurse or parent to manipulate, neither should they remove or apply fixing dressings and manipulate the foot. With the continuous plaster dressings correction is more quickly attained, and the restoring of balance between the adductor and abductor muscles and the reforming of articular facets is more certain, and the maintenance of the position is absolutely under control. The treatment is kept under the control of the surgeon better with plaster-of-Paris dressings than with readily removable dressings. There is less atrophy from plaster than from the restricting bands of braces. With reasonable care cleanliness is maintained, and there should be no irritation of the skin if the plaster is not carried above the knee. Excoriations will not interrupt treatment when zinc oxid adhesive plaster is used to protect the foot. A child walks much more comfortably and easily in a well-applied plaster dressing than in any confining brace. Adhesive plaster applications can be used when the surgeon desires to test the ability of the foot to maintain itself without allowing any loss in the amount of correction attained. Restoring the foot to an apparently corrected position does not constitute a final result. Soule holds that tenotomies are seldom necessary. When the tendo achilles is tenotomized a most important resisting point toward the correction of the deformity is removed. The division of the plantar and internal ligaments removes an important element in the correction of the abnormal contour. Open division of structures produces scar tissue which furnishes an added element toward relapse.

39. **Artificial Impaction in Hip Fracture.**—Cotton regards it rather strange in view of the admittedly poor prognosis of unimpacted hip fractures that no one seems to have reached the obvious inference as to treatment. He asks: if unimpacted hip fractures fail of union and do badly while similar impacted fractures do relatively well, then why not impact? Yet such impaction seems not to have been attempted in any deliberate fashion. Cotton tried it in one case. An unimpacted was converted into an impacted fracture. Perfect position was not obtained, nor was the erosion of bone ends entirely averted; but from the time of operation there was no crepitus, no mobility, no tendency to loose eversion, and the result is comparable with the usual result of impacted fracture of the femoral neck in a patient of this age and type. A similar result was obtained in a second case.

42. Abstracted in THE JOURNAL, July 2, 1910, p. 51.

Woman's Medical Journal, Cincinnati

May

48 Clinical Observations in Feeding Dispensary Babies. E. L. Coolidge, New York.
49 Factors for and Against Gynecologic Operations. M. D. Rushmore, New York.
50 Alcohol in Relation to Epilepsy. S. Radcliffe, Yonkers, N. Y.

Bulletin of the Lying-In Hospital of the City of New York

June

51 *Cesarean Section by the Small Median Incision Above the Umbilicus. A. B. Davis, New York.
52 *Summer Diarrhea in Infants Under Two Years. E. L. Coolidge, New York.
53 Radical Treatment of Abortion. G. W. Kosmak, New York.

September

54 Fibromyomata of the Uterus, Complicating Pregnancy, Labor and the Puerperium. R. W. Lobenstine, New York.
55 Prolapse of the Umbilical Cord. C. B. Knapp, New York.
56 *A Case of "Puerperal Bacteremia" Treated by Intravenous Injections of Magnesium Sulphate. R. W. Lobenstine, New York.
57 Pregnancy Complicated by Nephritic Abscess; Normal Delivery Followed by Nephrectomy. J. W. Markoe, New York.
58 A Case of Exstrophy of the Heart. J. E. Welch, New York.

December

59 An Outline of the History of the Society of the Lying-In Hospital of the City of New York. J. W. Markoe, New York.
60 The Beginnings of Mind in the New-Born. F. Peterson and L. H. Rainey, New York.
61 *What We Can Expect from Vaccines in Puerperal Sepsis. J. O. Polak, Brooklyn, N. Y.
62 *A Modification of Lane's Operation for Cleft Palate and Harelip. J. W. Markoe, New York.

51. **Cesarean Section.**—Davis makes a very extensive detailed report on 197 Cesarean sections performed in the service of 60,000 cases, or once in 304.56 cases (0.33 per cent.).

52. **Summer Diarrhea in Infants.**—The routine treatment pursued in this service of the Lying-In Hospital has been as follows: For bottle-fed babies under 1 year of age, as soon as the infant is seen, all milk is stopped and the baby given either barley or granum-water. These gruels are made by mixing 1 heaping teaspoonful of the flour with 1 pint of water, cooking the same for fifteen minutes, then adding a pinch of salt. This thin gruel is fed every two or three hours, according to the age of the child, the proper number of ounces for the special age being prescribed. Two ounces of boiled water are also given between meals. This feeding is kept up for twenty-four or forty-eight hours according to the severity of the attack. At the end of this time the mother is instructed to add 1 ounce of whole milk to each pint of the gruel and from this point the milk is gradually worked up in the formulæ until the correct amount for the child's age and digestive capacity is reached. The baby is not kept on gruel alone for any great length of time, and to this fact more than to anything else Coolidge attributes success in dealing with these cases. There are some babies that cannot digest the fat in cow's milk after a severe attack of diarrhea and in such instances condensed milk is substituted for the fresh milk, as the former contains such a very low percentage of fat that it is usually well borne by this class of babies. As the infant improves, fresh milk is gradually substituted for the condensed milk until the correct formula can be taken. Coolidge generally begins the condensed milk in a dilute mixture, often 1 part of the condensed milk to 30 of the gruel and gradually increases the strength until the dilution is 1 to 10 or 12 according to the age of the child. At this point one feeding of a weak fresh milk formula is substituted for one of the condensed milk, then in a day or two, two meals of the fresh milk, etc., until all fresh milk is being taken. Babies from 1 to 2 years of age are given, in addition to the above food, mutton or chicken broths free from fat, once or twice a day, also a little zwieback broken up in the broth. After two or three days, farina porridge made as thick as an ordinary breakfast cereal is given, often with a very small bit of butter added to make it palatable, until milk can be used on the same. In breast-fed babies, the mother is instructed to give barley-water for twenty-four hours and to apply the breast-pump at regular intervals during this time. Boiled water is also given to these breast-fed babies. At the end of this time 1 or 2 ounces of barley-water is given to the child just before the breast and then the nursing is allowed for five minutes at each feeding time. As the stools improve the amount of barley-water is decreased and the nursing from the breast increased until gradually the child is taking its usual amount of nourishment. The medication given these cases depends on the severity of the infection; when the stools are simply frequent, thin and yellow or green, give from 1 to 2 teaspoonfuls of castor oil and follow this up the next day by aromatic syrup of rhubarb, in doses of from 5 to 20 drops every three hours, according to the child's age. This is generally continued for two or three days. Very often this is all that is required. If at the end of this time the stools are still frequent, containing blood or much mucus, calomel, $^1/_{10}$ of a grain, every hour for ten doses is prescribed, and after several free movements follow it up by a bismuth mixture.

56. **Magnesium Sulphate in Puerperal Bacteremia.**—The uterine culture in this case showed a pure growth of streptococci at the end of twenty-four hours. The blood-culture presented no apparent growth after twenty-four hours, but a very abundant growth at the end of forty-eight hours. On the second day after admission, 30 grains of magnesium sulphate were dissolved in 8 ounces of sterile water and the mixture introduced into one median basilic vein at a temperature of 108 F. There was a slight chill after the infusion and the temperature went up temporarily from 103 to 104.2 F. The pulse continued about 120 to the minute, and on the second day following this first injection, both the pulse and temperature showed some slight improvement. The patient's general condition also appeared a trifle better. On the third day after the injection the temperature dropped to nearly the normal, while the pulse came down to between 90 and 100. That night, however, there was a sudden change for the worse; the temperature went up to 105 F., and the pulse 130-140. Strong stimulation was required and death was looked for within twenty-four hours, as the patient became weak and listless. A second injection of magnesium sulphate of the same strength was now given. This was again followed by a chill and a temperature rise to 106.4 F. Within six hours both the temperature and the pulse began to subside, so that two days later both were normal. A blood-culture taken at this time remained sterile after three day's incubation. Convalescence was rapid and uneventful thereafter.

61. **Vaccines in Puerperal Sepsis.**—Polak admits that vaccine therapy has a definite field in the treatment of puerperal septic infection in the subacute stage and after the local focus has formed, it hastens convalescence. Inoculations with autogenous vaccines will promise prompt results in staphylococcic and colon bacillic infections, but in streptococcic poisoning, vaccine treatment is unreliable, and is of value only when the virulence of the germ is attenuated, or when Nature has already developed a phagocytic defense.

62. **Modification of Lane's Operation for Cleft Palate.**—The technic of Lane is followed by Markoe, except that the mucoperiosteum covering the intermaxillary bone is separated from the subjacent bone and carefully fitted under a raised flap from the opposite alveolus, this completely closing in the arch of the alveolus and also helping to form the floor of the nose anteriorly.

Journal of the Delaware State Medical Society, Wilmington

May

63 What Is Heart-Block? A. Robin, Wilmington.

Kentucky Medical Journal, Bowling Green

May 15

64 Rheumatic Eye Disease. S. G. Dabney, Louisville.
65 Ectopic Gestation. H. A. Davidson, Louisville.

Journal of Pharmacology and Experimental Therapeutics, Baltimore

May

66 *An Experimental Study of Camphoric Acid. G. B. Roth, Ann Arbor.
67 Influence of Various Salts on Tetany Following Parathyroidectomy. C. Voegtlin and W. G. MacCallum, New York.
68 *Rôle of the Portal Circulation of the Liver in Bile Formation and Jaundice. C. Voegtlin and B. M. Bernheim, Baltimore.
69 *Laxative Properties of the Tribasic Salts of Phenolphthalic Acid. L. G. Rowntree, Baltimore.

66. **Action of Camphoric Acid.**—Roth found that both on frogs and higher animals sodium camphorate acts as a stimulant to the central nervous system, producing in the frog, at times, a distinct increase in reflexes. It is devoid of effect

on the secretory nerve endings of the sweat glands and in addition has no influence on the salivary secretions. The drug given as the sodium salt is comparatively non-toxic for frogs, cats or rabbits. It is more toxic when given intravenously than subcutaneously. Its diuretic effects are comparable to those of an indifferent salt such as sodium chlorid. It raises the blood-pressure in mammals and has some depressing effect on the heart muscle. These circulatory changes like the effects on the kidney are due to salt action. Camphoric acid given to animals as sodium camphorate is a true respiratory stimulant.

68. **Bile Formation and Jaundice.**—The authors hold that the amount of bile formed by the liver depends on the blood-flow through this organ. The jaundice and fatal toxemia resulting from occlusion of the common bile duct can be avoided by an Eck fistula made at the time of the ligation of the duct. In cases in which, owing to occlusion of the duct, jaundice has already developed, an Eck fistula causes the symptoms to disappear. It is shown by the authors that the liver has a hemolytic function.

69. **Laxative Properties of Tribasic Salts.**—Experiments were made by Rowntree to see if potassium phenolphthalate and sodium phenolphthalate possess purgative properties. The neutral solution was injected into dogs which were kept in separate metabolism cages and whose diet and water had been carefully controlled and the condition of whose stools was known. Only such dogs whose stools were well formed, were hard, dry and friable, were used. The skin was shaved in spots and the drug injected under aseptic conditions and with antiseptic precautions. At first it appeared that no local irritant effect accompanied the subcutaneous administration of these preparations, but in about half of the experiments evidence of local irritant effects did appear, sometimes only as a slight indurated nodule appearing within a week or two after the injection, again as an infiltration involving a considerable area and appearing within two or three days. Rowntree says that undoubtedly these preparations are irritant locally. These substances are of little or no value as subcutaneous purgatives and do not compare at all favorably with phenolphthalein itself or its tetrachlor derivative.

Journal of Ophthalmology and Oto-Laryngology, Chicago

May

70 Ocular Manifestations of Arteriosclerosis and Their Diagnostic and Prognostic Significance. C. A. Veasey, Spokane, Wash.
71 Neuralgia of the Larynx. H. Kahn, Chicago.

Vermont Medical Monthly, Burlington

May

72 Indigestion as a Surgical Symptom. I. S. Haynes, New York.
73 Bacteriologic and Serodiagnosis of Syphilis. C. F. Dalton, Burlington.

Dominion Medical Monthly, Toronto

June

74 *Case of Entero-Uterine Anus. F. W. Marlow, Toronto.
75 A Case of Infection of an Indefinite Nature in Which Sodium Salicylate Appeared to Have a Beneficial Action. G. Chambers, Toronto.
76 Insanity. R. H. Robinson, Toronto.

74. **Entero-Uterine Anus.**—Following an abortion in Marlow's case there developed an entero-uterine anus. Presumably the uterus was punctured during the induction of abortion or during later manipulations, and then the intestine was either dragged in through the opening or it herniated through. At any rate a few days later the fecal matter discharged from the uterus into the vagina, in its entirety, there being none whatever passed per rectum. Meanwhile the patient presented signs of pelvic peritonitis and was very ill. Later the peritonitis subsided, but she gradually became emaciated. The discharge was of fluid consistence and so irritating that excoriation existed all over the perineum and half way down the inner sides of the thighs. The conclusion arrived at by Marlow was that the opening was between the small intestine probably low down, as the emaciation was not extreme considering the time elapsed and the lower segment of the uterine body. Marlow did an entero-anastomosis and closed the opening in the uterus. The patient made a complete recovery.

Louisville Monthly Journal of Medicine and Surgery

May

77 Cancer of the Breast. L. Frank, Louisville, Ky.
78 Transfusion of Blood. D. W. Barrow, Lexington, Ky.
79 Acute Anterior Poliomyelitis. E. B. Bradley and F. H. Clarke, Lexington, Ky.
80 The Wassermann Reaction. R. H. Davis, Louisville, Ky.

Boston Medical and Surgical Journal

May 25

81 Occurrence of Infantile Paralysis in Massachusetts in 1910. R. W. Lovett and P. A. E. Sheppard, Boston.
82 *Anterior Poliomyelitis. M. J. Rosenau, P. A. E. Sheppard and H. L. Amoss, Boston.
83 *An Experimental Study of Tendon Regeneration. J. W. Sever, Boston.
84 *Tendon Suture. F. L. Richardson, Boston.

82. **Anterior Poliomyelitis.**—The fact that the virus of epidemic poliomyelitis was not demonstrated in the buccal and nasal and pharyngeal secretions of eighteen experimental cases studied by the authors is not considered by them to be proof that it may not have been there. They hold that in any event, the virus would have been greatly diluted, owing to the relatively large amount of salt solution used to wash the mucous membrane. Furthermore, under the conditions of the experiment, the virus may have been so attenuated as to be incapable of infecting monkeys. It is well known that a considerable quantity of the virus from the central nervous system of man is sometimes required to initiate the infection in monkeys. The authors do not construe their results as in any way disproving the assumption that the infection in this disease may be discharged from the mucosa of the upper respiratory passage and enter through the same channel.

83. **Tendon Regeneration.**—Thirteen operations were performed by Sever on as many cats for the purpose of studying this question. He found that: Silk or linen thread is an excellent material to use to lengthen tendons in suitable cases. The growth of new tissue will penetrate and permeate the silk only slightly, and in some cases not at all, and does not absorb it. When the peritendineum and tendon sheath have been removed, some foreign body such as silk is essential for regeneration, to serve as a director for the new growth. With the sheath and the peritendineum present and sutured, no foreign body need be inserted. In this case the new growth is true tendon tissue. Without the presence of the sheath and the peritendineum, no true tendon tissue can be regenerated. Such tissue is merely fibrous tissue, lacking elasticity and subject to stretching. The new "tendons" are apt to be larger and stronger than the resected ones, especially when silk has been used to replace the resected portion. Provided the sheath and peritendineum are preserved and function allowed early, adhesions may not occur. Without the sheath, adhesions may and do occur much more frequently.

84. **Tendon Suture.**—Richardson favors the following procedure: The first stitch is introduced in the shorter end of the tendon about a qurater of an inch from the cut end. (1) The suture is passed through the tendon transversely and (2) then back parallel to the first stitch at about the same distance from the cut end, but a little to one side of the first stitch. A half knot is tied, not too tight. (3) The same suture is then passed through the other end of the cut tendon, and while the assistant holds the cut ends together, the suture is (4) passed back parallel to the third stitch, a half knot is tied and the two free ends of the suture are securely tied together. The pull of this suture is obliquely across the fibers of the tendon. If the tendon is a large one, or if there is much strain in approximating the ends, a second and possibly a third similar suture may be introduced from other sides of the tendon. As this suture tends to displace the ends of the tendon laterally, it may be necessary to put one through-and-through suture near the cut ends to hold them in close approximation. Wherever possible, the tendon sheath should be reconstructed about the tendon to prevent the ingrowth of scar tissue from surrounding connective tissue. The important things to be borne in mind in tendon suture, stated in the order of their importance, are: (1) Asepsis, (2) preservation of peritendineum, (3) approximation of ends, (4) restoration of tendon sheath, and (5) dryness of wound.

Chicago Medical Recorder

May

85 Prognosis and Treatment of Burns. L. E. Schmidt, Chicago.
86 Caricature in Medicine. M. Frank, Chicago.
87 Treatment of Syphilis. A Retrospect and a Prospect. E. A. Fischkin, Chicago.
88 The Minor Cardiants. W. F. Waugh, Chicago.

Journal of the Minnesota State Medical Association and the Northwestern Lancet, Minneapolis

May 15

89 *Pulmonary and Circulatory Complications Following Surgical Operations. E. H. Beckman, Rochester.
90 *Autogenous Vaccines in the Treatment of Mixed Infections in Pulmonary Tuberculosis. R. T. Pettit, Ottawa, Ill.
91 *Sudden Death in Cardiovascular Disease. G. Cross, Minneapolis.
92 *Bovine Tuberculosis in Relation to Human Ills. A. Kuhlman, Melrose.
93 A Lead Shot in the Appendix. A. N. Collins, Austin.
94 A Case of Typhoid Perforation Successfully Operated On. A. C. Strachauer, Minneapolis.

89. Abstracted in THE JOURNAL, Nov. 26, 1910, page 1922.

90. An article on the same subject was published in the *Illinois Medical Journal*, April, 1911.

91. Abstracted in THE JOURNAL, Nov. 26, 1910, page 1922.

92. **Bovine Tuberculosis and Human Ills.**—In a farmer family, a girl, 16 years of age, complained of a sore throat, catarrh of the nose, foul breath and indigestion. On examination she had enlarged tonsils, swollen cervical glands, and a general congestion of the mucous membrane of the nose and throat. Lungs, negative; no tubercular history in the family. Shortly afterward her father complained of similar symptoms—catarrh, slight cough and indigestion. Three other children had enlarged tonsils, enlarged cervical glands and digestive disturbances. One boy had frequently severe pains in the stomach and abdomen, most marked over the cecum and always worse at night. The family was treated at intervals for about six months. Besides the local treatment of the nose and throat, medicine was given to relieve the indigestion, and general tonics were administered. Six months afterward the farmer applied to Kuhlman for treatment, and said that he had killed a cow which had been discharging from the nostrils, coughed and had slowly wasted away. A competent veterinary surgeon made a tuberclin test of all his cattle, thirty-eight in number. All, with the exception of six, gave the tuberculin test for tuberculosis. He sent all the cattle affected to the State Sanitary Board and they were slaughtered in South St. Paul. The farmer bought a new stock, but had every new cow tested. This was a year ago and since that time they have been practically free from ills. The catarrh is all gone and the boy has not had any more attacks of what Kuhlman once diagnosed as a slight attack of appendicitis. It is Kuhlman's opinion that there is more tuberculosis among cows than is generally believed by the average physician, and that it would be worth while in many cases to investigate the source of the milk as bearing some relation to disease.

Southern California Practitioner, Los Angeles

May

95 Puerperal Infections—Cause and Treatment. T. J. Watkins, Chicago.
96 Treatment of Disease by Spinal Concussion, Sinusoidal and Freezing, etc. H. E. Stroud, Los Angeles.
97 Physiology and Pathology of Senescence. H. E. MacDonald, Los Angeles.
98 The Dawn of Medicine, the Pre-Hippocratic Period. C. L. Allen, Los Angeles.

Archives of Pediatrics, New York

May

99 *Chronic Intestinal Indigestion in Early Life. J. P. C. Griffith, Philadelphia.
100 *Blood-Pressure in Cases of Acute Nephritis of Children. L. Gordon.
101 Certain Fractures of the Upper Extremity in Children. I. S. Haynes, New York.
102 Post-Typhoid Delirium. A. Baines, Toronto.
103 *Studies on Milk Sugar. H. F. Helmholz, Chicago.
104 Taxis and Succussion. A New Treatment of Intussusception. J. Zahorsky, St. Louis.

99. **Chronic Intestinal Indigestion.**—Griffith emphasizes that medical treatment of chronic intestinal indigestion in early life is largely of secondary consideration. The overcoming of the constipation, which is such a common symptom, is important. In addition to the hygienic measures, either small daily doses of a saline laxative or of cascara, phenolphthalein or similar drug may be required. In other cases a small amount of sulphate of magnesia or syrup of rhubarb may be added to the tonic medicines administered. In bad cases the nightly injection of olive oil or cotton-seed oil may be of service. Very often the diet may be selected to overcome the constipation, bearing in mind, however, that many of the laxative foods are more or less irritating to the bowels. As a rule, enemata are not efficient, as they operate only on the rectum. A drug is required which affects the whole intestinal tract. Where there is much secretion of mucus from the bowel, saline douching is sometimes of service, but this practice should not be continuous, as it sometimes maintains the symptoms which it is intended to cure. The administration of a good malt extract appears to aid the digestion of starch. One should be selected which is known to contain a large percentage of diastase, as there is a great difference among them in this respect. In general, as far as other medicinal treatment goes, Griffith has had the best results with the combination of an alkali with a bitter tonic. For this purpose, bicarbonate of soda may be given with tincture of nux vomica, compound tincture of gentian, and an aromatic water, administered ten to twenty minutes before meals. Cod-liver oil, although theoretically an excellent remedy to improve the general health, is often contraindicated, especially early in the disease, on account of its tendency to increase indigestion in many cases. The remark applies to the use of iron given for the anemia, since until convalescence is established this may increase the digestive trouble and the constipation. The importance of resistance in the treatment is emphasized. Griffith says that unless this is maintained, and especially unless the dietetic treatment is rigorously followed for months, an improvement which has seemed very decided, and even a cure which has seemed complete, will inevitably be followed by relapse.

100. **Blood-Pressure in Acute Nephritis in Children.**—According to Gordon, the blood-pressure in children suffering from acute nephritis is raised and this rise of pressure may be very great. In three of seven acute cases, the hypertension was very marked. This fact is of diagnostic value, as in no other disease of childhood is there to be found the same high range of blood-pressure. Those patients who had the highest pressure were those in whom only a slight trace of edema was noticeable, and also it is of interest to note that in these same patients the quantity of blood in the urine was very great, the urine indeed looking like the pure blood; the explanation of the large quantity of blood in the urine being probably, that a rupture of the renal capillaries had occurred consequent on the greatly increased blood-pressure. Gordon emphasizes the fact that in children it is only by means of the sphygmomanometer that changes in the blood-pressure can be ascertained with any degree of certainty.

103. **Milk Sugar.**—Helmholz tries to show that the commonest type of gastro-intestinal trouble is caused directly by the food; that it is brought on in its most acute form by the lowering or the overstepping of the tolerance for sugar, be that by improper feeding, by infection, by spoiled milk, by high external temperature, or by other causes. The food which under normal conditions, nourishes the child, becomes a poison as fatal as bacterial toxins. He emphasizes that the purity of the milk, though of great importance, is not the only important factor. The emphasis that is being laid on pasteurization of a city's milk supply, while it is of great value and, if properly understood, leads to much good, has, unfortunately, overshot the mark among the uneducated. Instead of feeding their infants fresh milk they avoid the bacteria entirely by giving them proprietary foods, with the dire results that one sees in dispensary work. This concentration on the bacteria of milk has left the equally important factor of the quantity and character of the food entirely out of account. How many mothers, he asks, are there in America to-day who realize the danger that lurks in the sugar which they so generously add to the milk? How many doctors are there who appreciate this fact? How many doctors are there who will tell a mother to stop nursing her child with no other indication than the fact that the first few

drops of milk expressed from the breast are blue? We see this in the dispensary only too often. This cornerstone of infant feeding is lightly set aside, not by one, but by a large percentage of physicians, who will take a child from the breast for the most trivial reasons. As regards his advice to mothers on feeding infants, it will depend largely on who sent him the last sample of proprietary food. What we need, he says, is educa^ion of the doctor primarily, and, by him, the education of the public. We need to cull the scientific and clinical facts from the mass of empiricism of infant feeding, so that they can be presented to the physicians in a form that will be useful to them, so that they may appreciate the dangers as well as the therapeutic advantages of the different elements of the milk. What we need is capable supervision of each milk station by men who can make each station a center from which the propaganda of rational feeding and therapy will spread, so that ignorance will keep no infant from the breast, so that ignorance will no longer prevent the institution of the right therapy when there is still hope to save the child.

New York Medical Journal

May 27

105 *An Operation for Progressive Spinal Deformities. R. A. Hibbs, New York.
106 Papillary Carcinoma of the Bladder with Metastasis of the Tarsus and Metatarsus. G. E. Shoemaker, Philadelphia.
107 Education in Social and Sexual Hygiene. C. E. Nammack, New York.
108 Why Are We Opposing Forms in Medical Nomenclature? T. W. Schaefer, Kansas City, Mo.
109 *Medicozoologic Nomenclature; the Correct Name of the Protozoon of Syphilis. C. A. Pfender, Washington, D .C.
110 Lactic Ferments in Genito-Urinary Works. F. S. Mason, New York.
111 Methyl Alcohol Amblyopia. T. B. Holloway, Philadelphia.
112 The Roentgen-Ray a Duty in Cancer. S. Tousey, New York.
113 A Plea for the Early Diagnosis and Early Surgical Treatment of Mammary Cancer with Special Reference to Obtaining Better Results. J. H. Gleason, Manchester, N. H.

105. **Progressive Spinal Deformities.**—Hibbs has done an operation for stiffening the knee joint (1), which consists of removing the patella from its periosteum and putting it in the joint after a space is freshened in the bones to receive it, the periosteum then being stitched to that of the tibia and femur. In these cases the patella was not absorbed, but formed a bridge between the tibia and femur, and the periosteum reproduced in every case new bone sufficient to make a large bony bridge and a perfectly safe bony ankylosis. This operation led to the conception, that if the periosteum of the spinous processes was carefully removed, and the processes were divided at their base and placed longitudinally in the interspinous space touching with either end of the base from which the processes were removed and then the periosteum brought back and sutured, a similar condition would be produced. That is, the process would become adherent to the base at either end, thus filling up the interspinous gap with solid bone, and the periosteum would reproduce more bone so that there would be secured a fusion of the posterior aspect of the vertebra by a bridge of bone which would increase in size and strength so that absolute ankylosis would be secured. Hibbs has done this operation on three patients, all with Pott's disease of the spine. A sufficient time has elapsed only in one case to give positive proof that the condition which he attempted has been produced.

109. **Medicozoologic Nomenclature.**—It is shown by Pfender that the correct generic name of the protozoon which produces syphilis is *Treponema*, with *Treponema pallidum* as type species, and not *Spirochaeta*, which has become popularized.

Medical Record, New York

May 27

114 The Medical Side of the Army Maneuvers in Texas. N. S. Jarvis, New York.
115 Dreams and Their Analysis in Reference to Psychotherapy. H. W. Frink, New York.
116 Functional Sexual Disorders Proceeding from the Genito-Urinary Tract. T. M. Townsend and J. J. Valentine, New York.
117 The Value of Doing Nothing. R. P. Francis, Montclair, N. J.
118 Herpes Zoster, Acute Poliomyelitis and Zinc Phosphide. W. F. Waugh, Chicago.
119 Treatment of Neurasthenia. F. H. Barnes, Stamford, Conn.
120 Pneumonia. C. S. Webb, Bowling Green, Va.
121 A Case of Transposition of the Heart. N. P. Brooks, Conquista, Coah., Mexico.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

May 13

1 *Functional Derangements of the Nervous System. G. E. Rennie.
2 Lead Poisoning and the Race. Sir T. Oliver.
3 Granular Kidney and Its Surprises. S. West.
4 *A Fatal Case of Secondary Syphilitic Nephritis. A. J. Hall and J. M. Beattie.
5 The Vasomotor System in Tabes. H. Matthews.
6 *Two Cases of Congenital Aphasia in Children. E. McCall.
7 *Treatment of Rheumatic Diseases by Vaccines. C. P. Ball.
8 *Deep Temperature of the Human Body at Rest and After Muscular Exertion. N. D. Bardswell and J. E. Chapman.
9 Prescription of Glasses. R. A. Morrell.
10 *Etiology of Iritis. R. A. Yeld.

1. **Functional Derangements of Nervous System.**—The point is emphasized by Rennie that the indications for treatment from a review of the pathology of neurasthenia are somewhat different from those in hysteria. While the mental symptoms are still prominent, it is not necessary to adopt the isolation treatment. A mistake is very often made, he says, in advising neurasthenic patients to start off on a sea voyage before any attempt has been made to improve their physical condition, although it is true that a change of scene and surroundings, combined with relief from work, is very beneficial in diverting the patient's thoughts from himself and restoring him to a healthier frame of mind. A neurasthenic is not only jaded in body and mind, and unable to stand the strain of traveling or to take an interest in sightseeing, but he is also suffering from digestive derangements and sleeplessness, and these latter conditions are often aggravated by traveling. Rennie has seen this so often that he is satisfied that we do best for our patients if we first of all put them to bed in the fresh air with quiet and rest, relieve their digestive disturbance by appropriate dieting, secure the free action of the bowels, favor elimination by the skin by warm baths and massage. The state of nutrition of the nervous system can also be improved by securing oral asepsis, by the use of intestinal antiseptics, and by the use of tonics, especially the glycero-phosphates and the hypophosphites. After a month or so of this treatment, the patient will be much improved physically, and will then be able to profit very considerably by a voyage or by a stay in some health resort. Rennie warns to be most guarded in prescribing sedative drugs—for example, opium, morphin or heroin—without very careful consideration, owing to the great tendency there is for patients to contract drug habits. In fact, he says, the less we depend on drugs, the more we adopt general hygienic treatment, the greater the amount of good we shall do for patients suffering from the various forms of functional derangement of the nervous system.

4. **Secondary Syphilitic Nephritis.**—In the case reported by Hall and Beattie, vomiting was almost constant, and a troublesome feature of the case. Nothing seemed to give any relief. They thought at first it was due to the milk diet, and eventually solid food was tried, but it made little or no difference. Headache was chiefly frontal and almost constant. Dropsy remained considerable at all times, and increased toward the latter part of life. The pitting over the abdomen and thorax was always great. The specific gravity of the urine varied from 1.010 to 1.019. The quantity was always considerably below normal, but the man sweated very profusely, not only in the hot-air baths, but often at other times also. The blood-pressure usually was about 160 (max. systolic). The temperature was normal throughout, and the fundi oculorum were normal. Early in June a papulo-erythematous rash appeared in the axillæ, elbow hollows and groins, the sites of mercurial inunction. This spread over the trunk and limbs, was very irritable, and peeled freely. A month later he became much worse, the dropsy increased, and the tongue and lips became more sore. The hands became tremulous, later the ears were sore and painful, conjunctivitis and inflammation of the nail-beds followed. On August 6 he became noisy and delirious, with insomnia, and he died comatose on Aug. 9, 1910. At the necropsy, the kidneys were

found enlarged, the capsules stripped easily, leaving a smooth surface, color pale, stellate veins marked. The superficial cortex was increased, being in the proportion to medulla of 1 to 1. Section showed a uniform yellowish color, vascular markings obliterated; no amyloid change, no pelvic dilatation; no cysts; tissue firm and edematous; vessels slightly thickened at places.

6. **Congenital Aphasia in Children.**—These two cases illustrating the forms of mental defect known as word-blindness and word-deafness, were met with by McCall during the course of medical inspection of the elementary school children. As they seemed to be fairly typical examples of these conditions McCall believes they are worth recording. Male, aged 12 years, was presented on account of his inability to learn to read. Except for this defect, he was of quite average intelligence. Most painstaking efforts had been made to teach him to read; for many years he had extra tuition at school for this purpose, but with practically no result. Hearing and vision were normal. He answered questions readily, recognized by name all objects presented to him, but failed to spell the noun denoting a given object. He recognized single letters, but was unable to interpret the written word. He wrote well from a copy, and had a good eye for form; he drew well from still life. One of his drawings represented an onion in section; below was written "Onion, cut across." When shown the word "onion" he named it correctly, doubtless from association of ideas; the two following words "cut across" he was unable to recognize. He could not write a single word from dictation, but could write his own name correctly, this being obviously mechanical, due to frequent repetition.

The second patient was a male, aged 8 years, Oriental by birth. Muscular control was poor; the child jerked and twisted his arms and head continually. When spoken to he took no notice, and might easily be taken for a deaf child. A noise at once attracted his attention. He responded by head movements to sounds made by the other children in the class. He attempted to reproduce the spoken word by lip reading, and succeeded to some extent. His brother, a very intelligent lad, communicated with him largely by signs. When shown an object and told its name he would repeat the word, watching the speaker's lips, but did not retain the memory of the word, even when again shown the object. His speech was markedly defective and the intonation resembled that peculiar to cleft palate (this might be due to the very high palatal arch). As words, however, meant nothing to such a child, he did not attempt to imitate them unless directly made to do so; he therefore did not learn to talk.

7. **Vaccine Treatment of Rheumatic Diseases.**—While resident medical officer to the Royal Hospital for the Incurables, Dublin, some years ago, where there are always a very large number of chronic rheumatic cases, Ball was struck with the peculiar sapremic appearance of most of these patients, and in some of them it was possible to trace in the history the onset of the disease following on some distinct infection, or subsequent to a chronic suppuration. From experience with a large number of cases, he believes that the focus of infection can at times be ascertained, and although a few are probably due to a specific microorganism, many cases are due to a general sapremia following from a localized seat of infection. Many cases have come under his notice where the focus of infection has been found microscopically to contain chiefly streptococci. In some cases even, where no seat of infection—such as bad teeth, leukorrhea, intestinal putrefaction and colitis—could be found, he has used the antistreptococcic serum with success. So many of these cases responded with such remarkable results that he thinks their use is justified in all doubtful cases. Even in a case of acute articular rheumatism following on an attack of gonorrhea with subsequent gleet, he has had success by the employment of antistreptococcic vaccines, when the injection of gonorrheal vaccines had failed.

8. **Body Temperature in Rest and After Exertion.**—It has frequently been stated that a rise of temperature following exercise is a characteristic sign of pulmonary tuberculosis, and, in fact, that the disease can be recognized by such a rise. Bardswell and Chapman are convinced by the results of their experiments that this obviously is not the case. Again, a rise of temperature occurring in a consumptive patient after exercise is by many considered to be evidence that the patient has inoculated himself. What is termed auto-inoculation may have taken place, but the fact of the temperature being raised, even to a considerable extent, is in itself no evidence of such auto-inoculation. The authors point out that it is a fact of some interest in this respect that the consumptive in good general condition, but with well-marked physical signs and with bacilli still in the sputum, will often be found to have a lower temperature after a given amount of exercise than a healthy person who has done exactly the same work. The rise of temperature in the consumptive in such a case is not due to an auto-inoculation; it is a physiologic rise as a result of the exercise. Finally, since it is the practice to regulate the exercise of consumptives in no small measure by noting the effects of given amounts of exercise on the temperature, it is clearly of great assistance to have a knowledge of the effect of such exercise on the temperature of the normal person.

10. **Etiology of Iritis.**—Of 159 cases of primary iritis referred to by Yeld, 45.28 per cent. were syphilitic; 16.35 per cent. were rheumatic; 15.09 per cent. were gonorrheal; 10.06 per cent. were toxemic; 1.25 per cent. were gouty; 1.25 per cent. were osteo-arthritic; and 10.6 per cent. were obscure in origin.

Lancet, London

May 13

11 *Heredity and Insanity. F. W. Mott.
12 Abnormal Forms of Breathing in Cases of Angina with Pulsus Alternans. J. D. Windle.
13 *Six Cases of "Utriculoplasty" for Uterine Hemorrhage. V. Bonney.
14 *Nature of Hematocolpos Fluid, and the Character of the Obstructing Membrane. W. B. Bell.
15 Hidden Dangers of Appendicitis: A Plea for Early Operation. H. J. Patterson.
16 *Unusual Effects of Perforated Gastric Ulcer. W. P. S. Branson and T. P. Legg.
17 Progress in Cancer Research. C. E. Walker.
18 Two Cases of Eosinuria. A. C. D. Firth.
19 *A Rare Case of Congenital Umbilical Hernia. J. P. Mitchell.
20 The National Insurance Scheme: The Prussian Official Tariff for Medical Attendance. G. P. Forrester.

11. **Heredity and Insanity.**—Mott summarizes his paper as follows:

1. Hereditary predisposition is the most important factor in the production of insanity, imbecility and epilepsy. It is the tendency to nervous and mental disease, generally speaking, which is inherited. This may be termed the neuropathic taint.
2. Education, sanitation and the rest, as Bateson has stated, are only the giving or withholding of opportunity for good or ill.
3. Alcohol is a powerful coefficient, but not of itself the main cause in the production of insanity, except in the rather infrequent cases of alcoholic dementia.
4. Certain types of insanity may be transmitted with greater frequency than others. This has been termed similar heredity. The types are: Periodic insanity (also termed "manic-depressive"), delusional insanity and epilepsy. The general rule, however, is for a different type to appear.
5. Mothers transmit insanity and epilepsy with much greater frequency than do fathers, and the transmission is especially to the daughters.
6. Anticipation or antedating is the rule whereby the offspring suffers at a much earlier age than the parent; more than one-half of the insane offspring of insane parents are congenital idiots or imbeciles, or have their first attack in the period of adolescence. This adolescent insanity may take an incurable form of dementia in a large number of cases; in others it is usually mania, melancholia, or periodic insanity, and not infrequently epilepsy with or without imbecility. Very rarely does the parent become insane before the offspring. This is a strong argument of hereditary transmission, possibly hereditary transmission of an acquired character.
7. Regression to the normal average may be (1) by marriage into sound stocks, or (2) by anticipation or antedating leading to congenital or adolescent mental disease terminating the perpetuation of the unsound elements of the stock.
8. High-grade imbeciles who are not at present in any way checked in procreating owing to social conditions interfering with survival of the fittest, together with chronic drunkards, neurasthenics and neuropaths, are contiually reinforcing and providing fresh tainted stocks.
9. Recurrent insanity, owing to the fact that patients are not segregated for any length of time, is probably the most potent cause of insane inheritance. Facts tend to support the opinion that the recurrent types of insanity during lucid intervals may breed a stock of potential lunatics and paupers.
10. Nature is always striving to go back to the normal average and only relatively few of a stock are insane. A stock with a streak of insanity when combined with genius is not bad, and the same may be applied to a nation; but we only want a streak of genius and insanity, the great body of the nation should be of good normal average, for Mott believes that nation will possess

the greatest potential virility in the struggle for existence that can breed from the greatest number of men and women with good bodily health, who possess a large measure of the three attributes of civic worth—viz., courage, honesty and common sense, combined with parentage, pride of family and pride of race.

13. **Utriculoplasty.**—Utriculoplasty is considered by Bonney a legitimate alternative to hysterectomy in the treatment of intractable uterine hemorrhage due to the condition variously known as "hemorrhagic metritis," "chronic fibrotic metritis," and other similar terms, and also that it is feasible to apply it to a uterus the seat of small multiple myomata. It would appear to be preferable to hysterectomy when the patient is still of child-bearing age, and the cervix is reasonably healthy, and especially if the patient herself objects to an enforced abolition of the menses. In the reverse of these conditions, removal of the uterus is the more suitable operation—by total hysterectomy if the cervix be unhealthy, by subtotal hysterectomy in all other cases. In the event of pregnancy following utriculoplasty it would, Bonney thinks, be desirable to induce the labor some weeks in advance in order to lighten the work of the uterus.

14. **Nature of Hematocolpos Fluid.**—According to Bell hematometra rarely occurs with hematocolpos, and can only be a very late complication. The non-coagulability of menstrual blood is due to the removal of fibrin ferment and fibrinogen, probably effected by the endometrium. The lactic acid present is not produced by bacteria. The calcium content of menstrual discharge is very high. The vagina is for the most part developed from the Müllerian ducts, and its lining epithelium may therefore occasionally be of a columnar type, and glands may be present.

16. **Perforated Gastric Ulcer.**—Severe pain over the left loin and lower ribs was the main symptom complained of by the authors' patient. This followed a supposed attack of pleurisy which was later shown to have been perforation of a gastric ulcer. Although gastric symptoms of note were conspicuously absent, the trouble had been gastric in origin, a cytologic examination of the contents of the fasting stomach was carried out, and demonstrated the presence of pus in considerable quantity. In spite of this positive evidence it was hard for anyone who saw the gusto with which the patient attacked an ordinary meal to believe that a serious lesion was present in the stomach. Blood examination showed a moderate grade of secondary anemia without leukocytosis. It was noted as a curious and recurrent feature of the illness that with each acute paroxysm of pain, the left arm and hand, with the left side of the chest, became covered with sweat, the right side remaining perfectly dry. At the operation, a tender epigastric swelling was found to be explained by a large area of dense fibrous adhesion by which the anterior wall of the stomach and the anterior belly wall were bound inseparably together, the cicatrix penetrating the belly wall to a considerable depth. The stomach was somewhat contracted, and exhibited a certain degree of hour-glass deformity at the site of its adhesion to the anterior parietes, while the posterior wall, in practically its whole extent, was immovably fixed to the tissues behind it. The greater omentum contained numerous enlarged and hard lymphatic glands. A certain amount of the dense fibrous material uniting the two was cut away, but it was finally decided that complete separation was impossible because so large a part of the anterior wall of the stomach was attached to the parietes. The belly was closed without the effecting of anything remedial. Contrary to expectation, the operation was a complete success. Five months later, the patient expressed himself as entirely free from pain, and had gained in weight.

The authors conclude that the pains which were the predominating feature of the malady in its later stages were neuralgic in character. It is supposed that they were excited by the involvement of branches of the intercostal nerves in the cicatrix which bound the stomach to the anterior belly wall, and that in the effort to effect a separation here the damaged nerve-endings were divided from their stems. They believe that the more or less fortuitous cure suggests that the part played by the intercostal nerves in producing the chronic pains of gastric ulcer is worthy of more attention than it has received. It is not unlikely that the unexplained relief of abdominal pain occasionally derived from an inconclusive exploratory operation may be due to section of peripheral nerves in the course of the incision, and conversely, that the failure to obtain relief from gastro-enterostomy may at times depend on the fact that the pain is not gastric in origin but neuralgic—that is to say, intercostal.

19. **Congenital Umbilical Hernia.**—Mitchell's patient was a child, 6 hours old. On examination the thoracic organs were found to be normal. The abdomen was the usual size, soft and palpable, but was everywhere resonant, no liver dulness being definable. Projecting very much into the attenuated umbilical cord was a body, which in size and shape resembled a cocoanut; it was of a deep bluish-red color, the surface was smooth and even, the consistence firm and resilient. There was no gurgling on pressure, and it was not reducible. At its attachment the base was 3 inches in diameter, circular, and surrounded by an area of very pink, hard and thick, but healthy skin. The umbilical vessels were situated on the under surface of the hernia. An incision was made on the superior surface of the hernia and a director was inserted between the parietal peritoneum and the contents of the sac. Adhesions which had formed were easily overcome, and when the sac was separated off, the whole of the left lobe and the greater portion of the right lobe of the liver were found prolapsed into the cord. It was not easy to replace it in the abdomen, for the round ligament was found to be holding it in its position; it was therefore ligatured and cut and the liver fell back into position. Three deep transverse silkworm-gut sutures were passed through the recti muscles, which were firmly approximated, the sutures being buried. The umbilical vessels being ligatured the thickened firm edges of the navel were trimmed and several superficial sutures inserted, thus obliterating the circular aperture and making a vertical wound. Healing took place by granulation and a perfect cicatrix was obtained. There is thus far no evidence of weakness in the abdominal wall.

Journal of Tropical Medicine and Hygiene, London

May 1

21 Infection by Schistosomum Japonicum. A. H. Skinner.
22 Schistosomum Japonicum Dysentery in an American Child. O. T. Logan.
23 Drugs and Drug Habits in Burmah. R. H. Castor.

Lyon Chirurgical, Lyons

May, V, No. 5, pp. 421-544

24 Fatal Complications of Cancer of the Prostate. (Comment meurent les cancéreux prostatiques.) V. Rochet and C. Ronot.
25 Access to the Pelvis by the Coccyx-Perineal Route. P. Flolle and D. Zwirn.
26 *Precordial Thoracectomy or Cardiolysis. (L'opération de Brauer dans un cas de médiastino-péricardite tuberculeuse.) J. Curtillet and G. Pélissier.
27 Advantages of Fowler Position in Treatment of Acute Peritonitis. L. Arnaud.
28 Gangrene of Intestine from Obliteration of Mesenteric Vessels. F. Leclerc and G. Cotte.

26. **Cardiolysis.**—Curtillet and Pélissier report the first application in France of Brauer's method of precordial thoracectomy for adherent pericardium although three other operations of the kind have been done in France since. The operation has been done twenty times in Germany and three times in England, they state. In the personal case reported the patient was a tuberculous young man, and although the operation warded off the dangers on the part of the heart, yet the tuberculous polyserositis continued its implacable course. The edema disappeared by the sixth day after the operation and the patient who had previously been confined to bed was able to be up and about, his heart then responding to digitalis, previously almost entirely ineffectual. In fifteen of the total twenty-seven cases the heart trouble was of tuberculous origin, and the results in this group were by no means the poorest reported.

Obstétrique, Paris

April, IV, N. S., No. 4, pp. 345-480

29 *Tuberculin Reaction During Pregnancy and Parturition. (De la sensibilité des femmes enceintes et recemment accouchées à la tuberculine.) P. Bar and L. Devraigne.
30 Technic for Pubiotomy. R. de Bovis.
31 *Glycogen in the Placenta. (Le glycogène dans le placenta discoide.) S. Zaretzky.

29. **Sensibility to Tuberculin of Pregnant and Parturient Women.**—Bar and Devraigne have applied the intradermal tuberculin test to 28 non-pregnant women, 137 in different stages of pregnancy, 198 recently delivered, and again a second time in 42 parturients. They also injected a drop of a 1 to 10,000 solution of tuberculin in 130 new-born infants. The findings all harmonize with the assumption of antibodies as responsible for the reaction to the tuberculin, especially the constantly negative results in new-born infants, the frequent negative results in tuberculous women with rapidly progressing lesions and the intensity of the reaction in tuberculous women who are holding their own against the disease. The findings are classified and tabulated under various headings. They differ in certain particulars from those reported by Stern in similar research.

31. **Glycogen in the Placenta.**—Zaretzky discusses the important glycogenic function of the fetal membranes and placenta and its share in the carbohydrate nourishment of the fetus. His monograph fills over sixty pages and is accompanied by ten full-page colored plates and an extensive bibliography.

Presse Médicale, Paris

April 29, XIX, No. 34, pp. 341-352

32 Technic for Total Resection of Superficial Idiopathic Varices of the Leg. P. Alglave.
33 The Radioscopic Changes in the Stomach, Duodenum and Large Intestine, Standing and Lying. T. Tuffier and Aubourg.

May 3, No. 35, pp. 353-360

34 *Localized Pulmonary Edema or Tuberculosis? R. Brunon.

34. **Nephritic Pulmonary Edema or Tuberculosis?**—Brunon has sometimes encountered cases in which edema in the apex of the lung, resulting from kidney disease, simulated a tuberculous process, passing through the phases of hemoptysis, induration and cachexia with cavity formation, and yet the tubercle bacilli were not involved. Differentiation is particularly important as nephritis and tuberculosis require opposite treatment, the extranourishing food indicated for the latter doing harm in the former. He describes a case of this kind in a youth of 15 with an acute febrile affection and physical signs, including radiography, suggesting induration of the right apex and involvement of some glands in the chest, discovered after the stormy onset of an acute febrile condition lasting twenty days, with slight albuminuria. The fever subsided with copious diuresis and the signs in the apex gradually disappeared, but the slight albuminuria persisted for eight months and the glandular process for a year. Cases of this kind confirm the possibility of a local congestion at the apex which may or may not be accompanied by a bronchial adenopathy. The diagnosis must be based on study of the antecedents, the evolution of the disturbances, analysis of the urine, which always contains more or less albumin in these cases, and on the benefit from restriction to a milk or milk-vegetable diet. This dieting is not only the best treatment but it serves to clear up the diagnosis.

Semaine Médicale, Paris

May 3, XXXI, No. 18, pp. 205-216

35 The Internal Secretion of the Stomach. M. Loeper.

Berliner klinische Wochenschrift

May 1, XLVIII, No. 18, 785-828

36 *By-Effects of Salvarsan. (Bedenkliche Nebenerscheinungen bei mit Salvarsan behandelten Patienten.) E. Finger.
37 Diffuse Elephantiasic Syphiloma. (Beitrag zur Salvarsanbehandlung.) I. Bindermann.
38 Syphilitic Primary Lesion in Scalp. (Zur Kenntnis des syphilitischen Primäraffektes an der behaarten Kopfhaut.) L. Weiss.
39 *The Cerebrospinal Fluid in Tuberculous Meningitis. J. Hohn.
40 *Colon Bacilli in Cerebrospinal Fluid. (Bacterium coli im Liquor Cerebrospinalis.) W. Hartwich.
41 Operative Cure in Case of Epigastric Hernia. J. Gottschlich.
42 Senile Atrophy of Skull in Dogs. L. Pick.
43 The Urine After Salicylic Medication. (Ueber den Harn nach Salicylsäuregebrauch.) C. Neuberg.
44 *Contrast Color Test in Study of the Blood, etc. (Die Kolorimetrie mittels der Kontrastfarbe, speziell in ihrer Anwendung auf die Hämometrie.) E. Schlesinger and E. Fuld.
45 *Treatment of Incontinence and Pyelitis. M. Klotz.
46 *Prophylaxis of the Plague. (Pest und Pestbekämpfung.) A. Worster.

May 8, No. 19, pp. 828-876

47 *The Psychic Condition Immediately After an Accident. (Der psychische Zustand frisch Verletzter.) E. Meyer.
48 *Tuberculous Peritonitis in Children: Forty-Five Cases. J. Cassel.
49 Policlinic Experiences with Albumin Milk in Infant Feeding. (Erfahrungen über Ernährung mit Eiweissmilch.) L. Rollet.
50 Intermittent Dyskinesia of Arm as Symptom of Sclerosis of Arch of the Aorta. A. Bretschneider.
51 Technic for Intravenous Injection of Salvarsan. S. L. Bogrow and H. Mayer.

36. **Injurious Action of Salvarsan on Nervous System.**—Finger here gives the detailed histories of three cases of optic neuritis after salvarsan, which have already been mentioned in these columns. He states that there have been quite a number of cases with peculiar and occasionally severe nervous manifestations with which the neurologists are not familiar, among the 250 patients who have been given intravenous injections of salvarsan at his clinic. He is convinced that in some of these cases the trouble was not a neurorecurrence but the result of toxic action from arsenic, similar to the phenomena frequently observed at once after the injection, such as headache, vertigo, tinnitus, dryness in the throat, prostration, palpitations, vomiting and diarrhea which all have their analogies in acute arsenic intoxication. The inefficacy of antisyphilitic measures applied against them confirms this assumption. In other cases they seem to be manifestations of the syphilis, assuming unusual forms under the influence of the salvarsan. Rusch has suggested that salvarsan may sensitize the virus, but the spontaneous retrogression of the manifestations in many cases testifies against their being of a syphilitic nature. In conclusion, Finger remarks that while convinced that salvarsan has an undoubted neurotropic action, yet he does not think that this is often displayed and the injury to the nerve seldom impairs its function completely, and the disturbance has a tendency to spontaneous retrogression, although in his first two cases permanent damage resulted. He regards it as his task at present to learn more about the new remedy before he combines it with the old and tried ones.

39. **Cerebrospinal Fluid in Tuberculous Meningitis.**—Hohn reports the findings in four cases out of a much larger number in his experience in which the puzzling diagnosis was cleared up by the findings in the cerebrospinal fluid which he regards as characteristic for tuberculous meningitis. These findings are very little sediment and very high albumin content in the cerebrospinal fluid, with lymphocytosis either pure or accompanied with a few polynuclear leukocytes. The latter are always in degenerative forms. In the case described, one or two tubercle bacilli were also found in the fluid soon after the disease had been differentiated by the above findings.

40. **Colon Bacilli in the Cerebrospinal Fluid.**—Hartwich reports the case of a man of 42 who had suffered from melancholia for over a year and was much debilitated, but the organs seemed to be intact until symptoms suggesting acute miliary tuberculosis developed, to which the patient succumbed. Necropsy revealed tuberculous ulceration in the small intestines which possibly explained the finding of colon bacilli in the cerebrospinal fluid twice during the last week of life.

44. **Contrast Hemoglobin Color Test.**—Schlesinger and Fuld have applied a new principle to determine hemoglobin percentages. It is based on the fact that when fluid of one color is inspected through a screen of another color the thickness of the screen determines whether the color of the screen or the color of the fluid behind it is perceived by the eye. The receptacle containing the blood, diluted to 5 per cent., is inspected through a screen which is a long, hollow tapering wedge, containing green gelatin. This hollow wedge is moved along over the vessel containing the blood, which is readily seen through the thin layer of green in the tapering end of the wedge-vessel, but as the thickness of the layer of green increases, toward the broad end of the wedge, there comes a point where the blood can no longer be seen, the eye perceiving merely the green interposed. In the apparatus constructed for the purpose the screen is covered, except for two slits, and as the screen is moved along it reaches a point where through one slit the red blood is still visible, while through the other slit, 5 mm. beyond, only green can be perceived. The point between the slits is accepted as the index of hemoglobin proportion. This same principle can be applied as a test for the proportion of indican, acetone, acetic

acid, etc., but it is important to select a color for the contrast which is transparent for rays of the same wave-length but which appear to the eye as another color. This method of determining the hemoglobin percentage is proving accurate and free from the influence of the personal equation.

45. **Treatment of Enuresis.**—Klotz has noticed that children inclined to enuresis sleep unusually heavily, and even when awakened in the night the bladder is liable to empty iself spontaneously before the child is fully aroused. In institutions the person on duty in the night can systematically wake the child and thus forestall the enuresis, but in the family the better plan is to prevent such heavy sleep by having the child take a nap morning and afternoon, for two hours. This is particularly important for lively, active children, and it is this class who are so exhausted at night that their sleep is abnormally heavy. By this means, with a little training, the children soon learn to awake and attend to Nature spontaneously. He has another method for less nervous children which has been found very effectual—inducing a psychic shock which seems to cure the tendency to enuresis. The child sits naked on a stool, the seat of which is cut out and has an arrangement below by which a strong jet of cold water can be turned against the anal and genital region. A single application of this method generally sufficed. If it has to be repeated he alternates the cold with warm water. He has found this douche a valuable aid in institutional cure of enuresis. In treatment of anal incontinence he trains the child to systematic defecation by the regular use of glycerin suppositories, twice a day, soon substituting cocoa butter suppositories and omitting both at the earliest moment when defecation proceeds without them, after rhythmic functioning of the bowels has been secured. In inflammation of the bladder and kidney pelvis, with acid urine, he has long been using potassium citrate with excellent results. He gives to infants from 0.5 to 1 gm. (7.5 to 15 grains) two or three times a day, increasing the dosage if the urine has not become alkaline by the second or third day. Larger children require larger doses to bring an alkaline reaction at once. The cure is generally complete in three or four weeks. This vegetable alkali, he says, is non-toxic and more effectual than sodium bicarbonate.

46. **The Plague.**—Worster refers to the experiences at Java in effectual warding off of cholera last year, and urges the adoption of similar measures in China. These are the establishment of a central bacteriologic station, where natives are trained in disinfection and vaccination and are then sent out to do the work among their compatriots, others taking their places in the training stations. The native assistants can do far more effectual work among the people than foreigners.

47. **The Psychic Condition After Accidents.**—Meyer has been devoting special attention to investigation of the psychic conditions immediately after severe accidents. In twenty-five of the thirty-seven patients examined, abnormal psychic conditions were evident and in five they were quite severe, prolonged or permanent. The psychic disturbances had no special features, but resembled closely those observed in infectious diseases, etc., including a slight tendency to delirium by the first or second day after the injury. It was a surprise to find on close examination so much disturbance, of which the patient himself was not aware, and which would have escaped superficial examination.

48. **Tuberculous Peritonitis in Children.**—Cassel reviews his experiences with fifty-two cases; in seven the tuberculous origin of the ascites was not certain but in the others there was no doubt of this. Eight of the children were under 2 years old, thirty between 2 and 6, and six between 7 and 11. Of the thirty-one without operative treatment eight of the children are cured, nine have died and the fate of the others is unknown. Only six of the fourteen given operative treatment are in good health to date, six others dying in a few weeks after the operation. The better the environment the greater the chances for recovery after the operation for tuberculous peritonitis, and he advocates an operation when the condition is still febrile after several weeks of medical measures. At the same time, when change of climate is possible and conditions are favorable, he clings to expectant treatment a little longer.

Centralblatt für die Grenzgebiete der Med. und Chir., Jena

April 28, XIV, No. 6, p. 209-240

52 *Deep-Lying Goiter. (Struma intrathoracica.) S. Kreuzfuchs. Commenced in No. 3.

52. **Intrathoracic Goiter.**—Kreuzfuchs reviews 116 articles bearing on this subject, grouping the findings and discussing the history, the relations between intrathoracic goiter and neighboring organs, its prevalence, the symptoms it induces, especially those on the part of the lungs, heart or mediastinum in general, and the differential diagnosis. The prognosis of the affection has much improved with the possibility of early diagnosis and perfected operative technic, but still the inaccessibility of the intrathoracic goiter renders its removal frequently difficult, pneumonia or mediastinitis having followed in Simon and Bouilly's two cases. Kocher has not lost any of his twenty-two patients of this class. The prognosis is graver if the operation on the goiter has been preceded by tracheotomy. Kolaczek has reported a cure after removal of a goiter protruding into the thorax and showing signs of malignant degeneration. The radical operation is preferable to all other measures of treatment, but an attack of suffocation might be combated by an appropriate position of the head and application of ice to the neck if the goiter has suddenly increased in size, giving morphin or codein, in case of spasm of the glottis, or a general anesthetic if the goiter has become incarcerated as occurred in Wölfler's case. Internal or external iodin treatment has given good results in some cases but Kocher warns that this is liable to be of service only for parenchymatous goiters, acute swelling of the thyroid in pregnant women or new-born infants while it is useless with old fibrous goiters and is directly dangerous with exophthalmic goiter.

Correspondenz-Blatt für Schweizer Aerzte, Basel

May 1, XLI, No. 13, pp. 449-496

53 *The Exudative Diathesis and Mountain Climate. A. v. Planta.
54 Increasing Prevalence of Urinary Calculi in Switzerland. E. Lardy.
55 Wassermann Reaction in Diagnosis of Syphilis. E. Sonntag. Commenced in No. 12.

53. **The Exudative Diathesis and Mountain Climate.**—Planta practices at St. Moritz in Switzerland and he states that the climate there has a remarkable action on the exudative diathesis and especially on one of its principal manifestations, bronchial asthma. The general health improves, the blood-picture shows marked benefit and the nervous system gains tone. It is a familiar fact, he says, that the constitutional diseases are much rarer among the inhabitants of mountain districts than elsewhere, and when they occur they are of a milder type. His sixteen child patients with bronchial asthma, brought up into the mountains as the last resort after failure of all other measures, had no further attacks. Only two of them had a mild recurrence in the first two weeks after an intercurrent severe "cold." But on return to the lowland the asthma returned, and it did not yield so readily during a second sojourn in the mountains. His experience confirms the necessity for making the most of the first stay, lengthening it out to a year if possible. The task is to transform the exudative diathesis, and this cannot be accomplished in two or three weeks. It requires a year at least. Arrangements should be made for the schooling of children, and for this and other reasons a children's sanatorium in the mountains offers the best chances for the children's outgrowing the tendency. Eight of his sixteen asthma children had obstinate eczema and four of these frequently had fleeting urticaria. All were extremely nervous children; three had convulsions and spasms —all this confirms the assumption of the underlying diathesis.

Deutsche medizinische Wochenschrift, Berlin

May 4, XXXVII, No. 18, pp. 817-864

56 Treatment of Wandering Kidney. (Wanderniere.) P. Fürbringer.
57 *Weil's Disease. A. Hecker and R. W. Otto.
58 *Percussion of One Apex when the Other is Muffled. (Neue Methode zur Perkussion der Lungenspitzen.) J. Plesch.

59 Serodiagnosis of Syphilis. (Syphilisdiagnostik und das Syphilisdiagnosticum nach v. Dungern.) J. Schereschewsky.
60 The High Frequency Electric Current in Medicine. (Hochfrequenzströme in der Medizin.) W. Telemann.
61 *Psychogenic Vulvar Pruritus. M. Walthard.
62 *Operative Treatment of Cerebral Apoplexy. (Hirnschlag.) H. Iselin.
63 Disturbances in the Circulation After Muscular Effort in Incipient Tuberculosis and Their Diagnostic Importance. (Frühtuberkulöser Kreislaufstörungen unter dem Einfluss von Muskelarbeit.) V. Hufnagel.
64 *Acute Syphilitic Nephritis and Salvarsan. (Akute luetische Nephritis im Zusammenhang mit einem durch Salvarsan geheilten Fall.) H. Nador.
65 Nitrite Poisoning from Fertilizer. (Ueber die Chilisalpetervergiftung und den spektroskopischen Nachweis des Nitrits im Blute.) K. Wind.

57. **Weil's Disease.**—Hecker and Otto describe the acute infectious disease characterized by jaundice, muscular pain, fever and enlargement of the liver and spleen, as they have observed it in army circles. Their data include 200 cases and show that the disease occurs almost exclusively during the heated term and that it is not contagious. Very mild and atypical forms of the disease are observed especially at the beginning and end of epidemics. The typical complete syndrome was encountered only at the height of the epidemic, and only in those who during the period of incubation were subjected to unusual physical stress, such as swimming.

58. **Percussion of the Sternum for Apex Findings.**—Plesch states that as the apices lie close to the first ribs, percussion is especially instructive when it is applied to the manubrium, with one hand laid over one apex of the lung, thus muffling the resonance here. This enables the resonance from the other lung to be perceived with unusual clearness.

61. **Psychic Pruritus.**—Walthard refers especially to vulvar pruritus and gives the particulars of two severe cases typical of the psychogenic pruritus. As soon as examination has shown that the parts are anatomically normal, notwithstanding the intense pruritus or neuralgia, he refrains from all local measures and merely by moral suasion convinces the patient of the harmlessness and baselessness of the pruritus. When he has brought the patient to the "Well, what of it?" point of view, the battle is won, and the patients are cured not only of their pruritus, but their whole mode of thought is transformed. This psychotherapy is efficient in all forms of psychogenic algias, hypersecretion of the genital glands and functional disturbances of the musculature of the genital organs.

62. **Operative Treatment of Apoplexy.**—Iselin comments on Franke's suggestion for operative treatment of apoplexy (mentioned in THE JOURNAL, Sept. 3, 1910, page 895), and states that he recently performed an operation of the kind, but on a mistaken assumption. The patient was a man of 62 who had fallen on a stone step and a subdural hematoma had developed. Iselin trephined three hours later. The immediate result was good, but after the brain had begun to pulsate again and consciousness had returned there was renewed hemorrhage, and necropsy showed that the trouble had been an apoplectic hemorrhage into the internal capsule. He reviews the literature on the subject, urging further discussion of Franke's suggestion.

64. **Salvarsan in Syphilitic Nephritis.**—Nador reports a case of acute syphilitic nephritis in a woman of 26 in which differentiation was long difficult. By the third week the entire body was swollen, vision reduced and there was much headache, with nausea and dyspnea. The Wassermann reaction cleared up the diagnosis, and after a single dose of salvarsan all the symptoms subsided within a month, without leaving a trace. The case teaches the importance of suspecting syphilis in every acute nephritis not otherwise explained. Except for a week of violent intestinal catarrh, there were no by-effects that could be attributed to the salvarsan; it was injected into the gluteal muscle in the dose of 0.5 gm.

Medizinische Klinik, Berlin

May 7, VII, No. 19, pp. 721-760

66 Phagocytosis and Virulence. T. J. Bürgers.
67 Successful Removal of Intradural Spinal Tubercle. (Intraduraler Konglomerattuberkel des Rückenmarks; Operation; erhebliche Besserung.) M. Bönniger and S. Adler. Commenced in No. 18.
68 Metabolism in Myxedema. A. Gigon.
69 Favorable Influence of Injection of Blood from Patient with Polycythemia in Case of Pernicious Anemia. E. Walter.
70 Relations Between Myoma and Diabetes Mellitus. E. Neisser and H. Koenigsfeld.
71 Advantages of Combined Mercury-Salvarsan Treatment of Syphilis. M. Loewenberg.
72 *Salicylates in Prevention and Treatment of Chronic Disease, and Especially of Nephritis. (Bemerkungen über Krankheiten und Krankheitsbehandlung und Besonderes über Nierenentzündung.) F. Weitlaner.
73 Importance of Dietetic Treatment in Disease of Upper Air Passages. M. Senator.
74 Relations Between Artificial and Natural Means of Cure at Health Resorts. (Verhältnis der künstlichen Kurmittel zu den natürlichen des Kurortes.) J. G. Siebelt.
75 Lipoid Droplets in Urine Sediment. F. Falk and L. v. Sieben-rock.

72. **Salicylates and Long Life.**—Weitlaner comments on the importance and frequency of infection in affections hitherto considered as purely functional, and in the flaring up of old chronic processes. He thinks that death in the elderly is almost invariably due to some acute infection, generally with the pneumococcus. Without infection he thinks that men might live to be 150 years old. He even suggests that the old saying should be modified to "A man is as old as he is sensitive to pneumococcus infection." To attain a ripe old age infection must be avoided, and as this is practically impossible, the next best is to fight infection. He declares that after reaching the age of 50 or 60 years, the systematic ingestion of salicylates, combating besides every fresh infection at once energetically with sodium salicylate, will unquestionably prolong life materially, barring accidents. He advises for this to take a powder twice a day, the prescription being 30 gm. (463 grains) sodium salicylate and 3.6 gm. (57 grains), powder of ipecac and opium; to make xx powders. This internal disinfection strikes at the root of the infection which is responsible for the neurasthenia, nephritis, appendicitis or other morbid conditions. Among the arguments presented to sustain this advocacy of a systematic chronic course of salicylic medication, is that membranous enteritis, a pre-eminently chronic affection, flares up afresh with every febrile sore throat. He regards nephritis as a pneumococcus or staphylococcus infection reaching the kidneys from the throat, and bases treatment thereon, giving salicylates and scrupulously avoiding new infection. His prescription with nephritis is the same, with addition of 6 gm. (90 grains) of hexamethylenamin and having from three to five pills taken each day. The treatment has to be chronic, the same as for appendicitis, but his success in this line, he says, speaks for the logical basis for making the salicylates the panacea for warding off the evil effects of infection in the elderly. The efficacy of many of the new drugs is due to their salicylic content, and strive as we may after new directions for therapeutics, we always come back to the drugs which act as internal disinfectants. Progress will be realized, he thinks, when instead of drugs to act on certain diseases, we classify drugs according to their action on pneumococci, streptococci and other microparasites.

Münchener medizinische Wochenschrift

May 2, LVIII, No. 18, pp. 937-992

76 *Oxygen-Poor Air in Therapeutics. (Therapeutische Verwendung sauerstoffarmer Luft beim Menschen.) A. Schmidt and O. David.
77 Cholera a Nitrite Poisoning. (Neue Beweise für die Verursachung der Cholera durch salpetrige Säure.) R. Emmerich.
78 Fascia Flap to Close Defect in Trachea. (Neues Verfahren zur Deckung von Trachealdefekten.) Hofmeier.
79 Improved Technic for Proctoclysis. (Die rektale kontinuierliche Kochsalzinfusion; der "Tröpfcheneinlauf" unter Kontrolle des Auges.) E. Martin.
80 High Irrigation of the Intestine. (Die hohe Darmspülung und ein Mastdarmrohr für Sphinkterschwäche—Doppelballonsonde.) W. Kausch.
81 *Experiences with Salvarsan. M. Neuhaus.
82 An Immediate Plus a Tardy Reaction to Vaccination. (Die Doppelreaktion bei der Kuhpockenimpfung.) C. v. Pirquet.
83 Post-Mortem Cesarean Section. (Kaiserschnitt an der Toten.) R. Stern.
84 Multiple Mercury Poisoning During Shooting-Match Indoors. (Eine seltene Enstehungsart von Quecksilberintoxikation.) C. Boesl.
85 Infant Dispensaries and Infant Mortality. (Wirksamste Bekämpfung der Säuglingssterblichkeit.) A. Vidal.

76. **Oxygen-Poor Air in Therapeutics.**—Schmidt presents evidence to prove that all the bad effects of high altitudes are due to the lessened atmospheric pressure, while the favorable effects on the blood-producing apparatus and on the respira-

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tion are due to the lessened oxygen partial pressure in the lungs. Reduction of the oxygen pressure permits its better absorption by the epithelium of the alveoles. He has consequently constructed an apparatus in which the person breathes. While the atmospheric pressure is maintained at the ordinary level, the air within has only about 12 per cent. of the ordinary proportion of oxygen. In the twenty cases in which he has systematically applied this method of treatment, anemic conditions have shown remarkable improvement, even pernicious anemia, and asthma and chronic bronchitis have also benefited to a notable degree. Chlorosis and bronchitis with emphysema have also responded well to the treatment, he adds.

81. **Salvarsan in Syphilis.**—No unfavorable experiences were encountered in the seventeen cases of syphilitic and parasyphilitic affections of the nervous system in which salvarsan was given by Neuhaus. In another case a patient was admitted to the hospital in an unconscious condition with exophthalmos and choked disk. As a syphilitic factor was surmised, the Wassermann test was applied, but before the finding was learned the patient suddenly died. The reaction was positive; if this had been known in time salvarsan would certainly have been given, but the trouble proved to be a tumor in the hypophysis cerebri, with not a trace of syphilis apparent in any organ. The case teaches that a positive Wassermann reaction alone is not sufficient basis for indicating salvarsan treatment. Neuhaus made five injections in one case, at intervals of about a month, the doses ranging from 0.3 to 0.5 gm. of salvarsan, injected into the gluteal muscles or high in the back.

Therapeutische Monatshefte, Berlin

May, XXV, No. 5, pp. 269-340

86 *Treatment of Acute and Chronic Intestinal Catarrh in Children. L. F. Meyer.
87 *Treatment with Anions. (Ueber Anionen-Behandlung.) P. Steffens.
88 *Foreign Bodies in Bronchi. (Zwei bronchoskopische Fälle von Fremdkörperextraktion.) W. Uffenorde.
89 Hemostyptic Action of Heart Tonics. (Hämostyptische Wirkung von Kreislaufmitteln.) R. von den Velden.
90 Influence of Salvarsan on Intensity of Antibody Production in the Rabbit. E. Friedberger and N. Masuda.
91 Connection Between Ductless Glands and Lymph Spaces. (Beziehungen der Blutdrüsen zu den Lymphräumen, mit bes. Berücksichtigung der Hypophysis und der Gehirnventrikel als Teile des Wärmeregulationsapparates.) C. Jacobi.

86. **Acute and Chronic Intestinal Catarrh in Children.**—Meyer remarks that the diarrheas of children are the daily bread of the general practitioner, and declares that the practice of restricting the children to "flour soup" (browned flour with butter and water to make a soup) after a day of restriction to tea alone, is what often transforms a harmless acute enteritis into a chronic catarrh. He is convinced that excessive carbohydrate fermentation is the primary cause of severe dyspeptic disturbances, both in infants and older children. The physiologically weak intestine of the infant and the intestine of the older child, after it has been weakened by severe disease, behave alike in respect to carbohydrates. Schmidt says that at all ages disturbances in the digestion of carbohydrates entail most readily intestinal catarrh, as the starch waste in the bowel putrefies so easily. Meyer also strikes milk from the diet in the diarrheas of children for at least a week after the stools are normal once more. The albuminous type of foods, with fat, but very little carbohydrates, should be the main reliance. The food should all be put through a hair sieve for infants and through an ordinary sieve for older children. He allows by the second day two tablespoonfuls of white cheese with a slice of white bread, mixed with a little warm saccharin water and put through a sieve; the third day bouillon with one or two tablespoonfuls of boiled or raw meat, all sieved. By the fourth day he permits addition of two tablespoonfuls of spinach or turnip with a banana. The above is the diet for a child of 4 or 5; it represents about 1,204 calories, which is not much below the normal ration of 1,380 calories for a child of this age, but the proportion of carbohydrates is scarcely a tenth of that in the ordinary ration. In his extensive experience this albuminous type of diet has proved its usefulness in acute cases and is far superior to the "flour-soup" diet in the subacute and chronic cases. He has never known it to fail to date.

87. **Anion Treatment of Rheumatism and Neuralgia.**—Steffens applies treatment with the negative pole of an electric current with high tension and reports successful clinical experience with it. He believes that the efficiency is due to the same elements as in the radio-active mineral waters, as he describes in detail.

88. **Foreign Bodies in the Bronchi.**—Uffenorde reports two instructive cases to impress on general practitioners the importance of suspecting a foreign body as the cause of the disturbances in puzzling cases and the importance of immediate visual inspection of the region; every moment's delay is dangerous. Everything should always be prepared for tracheotomy at once when the attempt to extract the foreign body has not proved successful. In one of the cases reported the presence of the foreign body was not suspected for three months. The mother had mentioned at one time that the child might have "swallowed" part of a hook-and-eye fastening, but this had been disregarded. The foreign body changed its position occasionally, sometimes causing suffocation, and then would follow a period free from symptoms. The diagnosis had been tracheobronchitis or diphtheria. When the foreign body was finally recognized it was planned to extract it with the use of the big magnet used for the eye, but an emergency tracheotomy had to be done before this was practicable. The other child had aspirated a bean into the bronchus and it had swelled so that the vocal cords did not permit its extraction and tracheotomy had to be done. The healing of the wound was delayed by a phlegmonous complication, and during the fourth week fatal convulsions developed. In future, Uffenorde says, he will not attempt the removal by the mouth of a foreign body that can swell if it has been in the air passages over twenty-four hours.

Therapie der Gegenwart, Berlin

May, LII, No. 5, pp. 193-240

92 Medical Education: President's Address at Internists' Annual Meeting. (Eröffnungsrede des 28. Kongresses für innere Medizin.) L. Krehl.
93 *Hemorrhagic Purpura After Injections of Fibrolysin. K. Friedmann.
94 Epidemic Poliomyelitis. (Akute epidemische Kinderlähmung.) P. Krause. Commenced in No. 4.
95 *Salvarsan in Recent Syphilis. (Was leistet das Salvarsan bei der Behandlung der frischen Syphilis?) A. Blaschko.

93. **Hemorrhagic Purpura After Injections of Fibrolysin.**—Friedmann's patient was a woman of 67, healthy until a rheumatic affection developed in the shoulders and hip joints, which proved rebellious to the salicylates. In the course of the third month she was given a course of baths, superheated air and massage, supplemented by injections of fibrolysin, according to directions, every second day. After 10 ampoules of fibrolysin had been injected, the patient was much improved and left the institution. She returned in less than a month with recurrence of the chronic rheumatism, and after a course of 10 ampoules of radiogen, with scarcely any benefit, the fibrolysin was resumed. Each injection was followed by headache and some malaise, and this became quite severe by the tenth injection of the second course, and severe hemorrhagic purpura developed the next day with the general condition much impaired, and blood perceptible in the urine and stool, but the rheumatic trouble had permanently disappeared. The purpuric symptoms kept up severely for nearly two weeks, but then all subsided. A total of nineteen injections of fibrolysin had been made, the last one four months after the first.

95. **Present Status of Salvarsan in Treatment of Recent Syphilis.**—Blaschko declares that the time is still too short to determine whether the syphilis apparently cured by the salvarsan has been actually conquered by the abortive treatment, but it certainly in many cases puts an end to all the visible symptoms of early syphilis. Its disadvantages are the rapid letting up of its action, as evidenced in the early development of secondary symptoms, and the injury of the nervous system, especially of the optic and auditory nerves, observed in some cases. He advocates a combination of salvarsan and mercury as early as possible after infection, but states that there is no compelling reason for giving salvarsan at all except where mercury is not applicable.

Wiener klinische Wochenschrift, Vienna

May 4, XXIV, No. 18, pp. 619-654

96 Physiologic Action of Mountain Climate. A. Durig.
97 Pathogenesis of Cretinism. A. Flinker.
98 Case of Tetany After Injection of Adrenalin (Epinephrin) in Osteomalacia. R. Marek.
99 Pigmented Blood-Cells in Urine; the "Heart Defect Cells." (Vorkommen von "Herzfehlerzellen" im Harn.) E. Koller.
100 The Melostagmin Reaction in White Rats After Removal of Both Suprarenals. F. Cattoretti.

Zentralblatt für Chirurgie, Leipsic

May 6, XXXVIII, No. 18, pp. 629-660

101 *Cause of Inguinal Hernia. (Zur Aetiologie des Leistenbruches.) A. Hagentorn.

101. **Etiology of Inguinal Hernia.**—Hagentorn has made a practice of examining the other side in operating for inguinal hernia of late, and states that in four out of ten cases he has found a pouch of peritoneum on the sound side exactly like the hernial sac, only much smaller and of course empty. He regards this as a congenital peritoneal process which merely awaits favoring conditions to develop into a typical hernia. The size and shape of the pouch exclude a mechanical origin for it.

Zentralblatt für Gynäkologie, Leipsic

May 6, XXXV, No. 18, pp. 673-696

102 Treatment of Eclampsia by Excising the Breasts. (Die Heilung der Eklampsie durch die Entfernung der Brüste.) A. Herrenschneider.
103 Raising the Pelvis or Knee-Elbow Position for Delivery in the Home. (Beckenhochlagerung oder Knie-Ellbogenlage bei Entbindungen im Privathaus.) W. Liepmann.

Gazzetta degli Ospedali e delle Cliniche, Milan

April 27, XXXII, No. 51, pp. 539-546

104 Traumatic Tuberculosis. A. Salomoni.

April 30, No. 52, pp. 547-562

105 Etiology of Pellagra. (Le critiche di L. W. Sambon alle teorie maidiche.) M. V. Carletti.
106 Familial Hemoglobinuria from Quinin in Malaria. M. Angelo.

May 2, No. 53, pp. 563-570

107 Asthenia of Connective Tissue in Origin of Hernia. (Sulla astenia connettivale con speciale riguardo alla patogenesi dell'ernia.) P. Leonardo.

Policlinico, Rome

April 30, XVIII, No. 18, pp. 553-584

108 Case of Brocq's Parapsoriasis. E. Toscani.
109 Two Cases of Oriental Sore. (Due casi di Bottone di Oriente.) F. Micell-Capurbano.

April, Surgical Section No. 4, pp. 145-192

110 Experimental Research on Changes in Kidney Functioning with Disease of One Kidney. (Variazioni della funzionalita renale, nelle nefropatie unilaterali.) S. Marinacci.
111 *Origin of Neoplasms. (Sui recenti contributi alla dottrina dei neoplasmi.) G. Fichera. Commenced in No. 3.

111. **Origin of Neoplasms.**—Fichera has continued his research on this subject, especially with embryonal and fetal tissue grafts. He thinks it is significant that spontaneous malignant tumors are extremely rare in young rats, and that preceding ingrafting of embryonal or neoplastic tissue frequently protects susceptible rats against inoculation of cancer tissue; also that subcutaneous or local injection of autolyzed homogeneous cancer or fetal tissue determines the involution of ingrafted cancer tissue which, under other circumstances, gives 100 per cent. of positive results. His experiences in these various lines have convinced him that the cancer-producing property can be corrected, at least temporarily, by supplying the cellular products of secretion and histolysis, the lack of which is the cause of the cancerous growth, and he describes his work in this line.

Riforma Medica, Naples

April 24, XXVII, No. 17, pp. 449-476

112 *The Tourniquet Sign of Hemorrhagic Disease. (Sul valore clinico e sulla patogenesi di un nuovo segno del prof. Grocco—segno del laccio.) C. Frugoni and Giugni.
113 Action of Chloroform on the Glycogen of the Muscles. (Azione della cloroformizzazione sul glicogeno muscolare.) P. Colace
114 *Two Cases of Primary Tuberculosis of the Striated Muscles. G. Spelta.

May 1, No. 18, pp. 477-504

115 Experimental Research on Influence of Quinin on Regeneration of the Blood in Anemia from Venesection. (Influenza della chinina sulla rigenerazione del sangue nelle anemie da sottrazioni sanguigne.) D. De Sandro.
116 *Cardioptosis. (Morbo del Rummo.) G. Fiorito.

112. **The Tourniquet Sign of Disease with Hemorrhagic Manifestations.**—Frugoni and Giugni discuss the mechanism and significance of the local phenomena which develop in an affection with a tendency to hemorrhagic manifestations when a slightly constricting band, a lacet, is applied to the limb above, as described in THE JOURNAL, Feb. 18, 1911, page 545.

114. **Primary Tuberculous Lesion in Muscle Tissue.**—In the first of the two cases reported the lesion developed in the abdominal wall of a boy of 8, in the rectus, and was excised about a month after it had been first noticed. It contained numerous tubercle bacilli. The other patient was a man of 40, and the lump was below the left axilla, about the size of a hen's egg, in the serratus magnus. There did not seem to be any other manifestations of tuberculosis in either case, and both patients were apparently cured by excision of the lesion.

116. **Cardioptosis.**—Fiorito analyzes a typical case of downward dislocation of the heart, the anomaly to which Rummo called attention in 1900. The patient was a man of 22 with pronounced neurasthenia and symptoms on the part of the heart after exercise, pulsation in the epigastrium and discomfort when the food passed from the esophagus into the stomach. He found that this discomfort could be avoided by bending forward as he swallowed the food; this evidently removed the pressure of the sagging heart from the lower part of the esophagus. There were also signs of gastro-intestinal atony. The apex beat was in the sixth interspace and very weak.

Hospitalstidende, Copenhagen

April 19, LIV, No. 16, pp. 417-440

117 Care After Radical Operation on the Middle Ear. (Efterbehandlingen af Radikaloperationen af Mellemøret.) J. Boysen.
118 *The Wassermann Reaction with Serum from Patients Under Influence of Chloroform or Ether. H. Boas and T. Petersen.

April 26, No. 17, pp. 441-472

119 *Return Cases of Diphtheria. J. Sørensen.
120 The Cerebrospinal Fluid in Syphilitics. (Undersøgelser af Spinalvæsken ved Syfilis uden Nervesymptomer.) H. Boas and H. Lind.

118. **Wassermann Reaction in General Anesthesia.**—Boas and Petersen obtained a positive reaction in three out of sixty patients tested while under the influence of general anesthesia. In all the cases chloroform had been used, and a week later the reaction was negative again. All the patients tested were free from any history or signs of syphilis.

119. Summarized in THE JOURNAL, May 6, 1911, page 1370.

Hygiea, Stockholm

April, LXXIII, No. 4, pp. 385-512

121 Treatment of Dislocation of the Lens. (Linsluxation uti främre kammaren.) K. Stålberg.

Norsk Magazin for Lægevidenskaben, Christiania

May, LXXII, No. 5, pp. 529-624

122 Treatment of Fractured Radius. H. Schilling.
123 Technic of Sclerotomy for Glaucoma. (Om min teknik i Sclerectomia limballs for glaukom.) S. Holth.
124 Rupture of Small Intestine from Contusion. (Ruptura intestini tenuis, frembragt ved ytre stump vold.) C. Johannessen.

Ugeskrift for Læger, Copenhagen

April 20, LXXIII, No. 16, pp. 545-580

125 *Rheumatic Symptoms in Muscles and Fibrous Tissue and Massage. (Om reumatiske Lidelser i Muskler og fibrøst Væv og deres Behandling med Massage.) C. Heyerdahl.

April 27, No. 17, pp. 581-630

126 *Trauma in Origin of Cancer from Standpoint of Insurance. (Den forsikringsmæssige Bedømmelse af Traume som Aarsag til ondartede Svulster.) E. A. Tscherning.
127 Motor Gastric Disturbances with Intestinal Disease. (Retention i Ventriklen ved Tarmlidelser.) R. W. Klær.
128 Treatment of an Inoperable Lymphosarcoma with Coley's Fluid. P. H. Perch.

125. **Massage in Treatment of Muscular Rheumatism.**—Heyerdahl reviews the Danish literature on this subject in the last five years, and reports excellent results from moderate massage. The rheumatic affection is localized both in muscle and fibrous tissue, the main symptoms being pains, tenderness and functional disturbances. They differ from nervous disturbances in the hindrance to the movements of the part, and in the fact that the rheumatic pains are most severe in the morning or after rest and are improved by work, contrary to what is observed in neuritis. The rheumatic pain in the head radiates from the back of the neck upward, while the neurasthenic headache spreads sideways over to the forehead, back of the eyes and thence upward to the top of the head. The

rheumatic pains also occur only with certain movements, while the nervous accompany any movement. The lumps and nodules felt by some in the muscles, the seat of the rheumatism, he thinks are merely the natural contraction of the muscle under the influence of the palpation. Local tenderness is not a reliable means of differentiating between nervous and rheumatic affections, he declares, as there are so many points which are sensitive in every one. Rest is useful in nervous and periosteal affections, while the muscular profit by a certain amount of exercise.

126. **Trauma in Origin of Cancer.**—Tscherning reviews ten cases in which cancer developed at the point of a trauma, and a claim was made for industrial insurance money. In only a few of the cases was a causal connection probable. In one case the trauma caused a fracture of the femur at a point which proved to be already the site of a sarcoma and the limb was exarticulated—the trauma in this case revealed the malignant disease long before it would otherwise have been detected. In the case of a man of 36, previously healthy until a block of ice fell against the lumbar region, a sarcoma gradually developed in the right kidney and the kidney was removed the fourth month, but the patient succumbed to metastasis nine months after the accident. An insurance indemnity was awarded in this case, the death being regarded as the result of the injury, but this was accepted in only one of the other cases.

Books Received

Books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for review in the interests of our readers and as space permits.

A PRACTICAL MEDICAL DICTIONARY of Words Used in Medicine, with Their Derivation and Pronunciation, Including Dental, Veterinary, Chemical, Botanic, Electric, Life Insurance and Other Special Terms; Anatomic Tables of the Titles in General Use and Those Sanctioned by the Basel Anatomic Convention; Pharmaceutical Preparations, Official in the U. S. and British Pharmacopeias and Contained in the National Formulary; Chemical and Therapeutic Information as to Mineral Springs of America and Europe, and Comprehensive Lists and Synonyms. By T. L. Stedman, A.M., M.D., Editor of "Twentieth Century Practice of Medicine" and the *Medical Record*. Leather. Price, $5. Pp. 1,000. New York: William Wood & Co., 1911.

GOLDEN RULES OF PEDIATRICS. Aphorisms, Observations and Precepts on the Science and Art of Pediatrics. Giving Practical Rules for Diagnosis and Prognosis, the Essentials of Infant-Feeding and the Principles of Scientific Treatment. By J. Zahorsky, A.B., M.D., Clinical Professor of Pediatrics, Medical Department Washington University, St. Louis. With an Introduction by E. W. Saunders, M.D., Emeritus Professor of Diseases of Children and Clinical Midwifery, Medical Department Washington University, St. Louis. Cloth. Price, $2.50. Second Edition. St. Louis: C. V. Mosby Co., 1911.

A TUBERCULOSIS DIRECTORY. Containing a List of Institutions, Associations and Other Agencies Dealing with Tuberculosis in the United States and Canada. Compiled for the National Association for the Study and Prevention of Tuberculosis. By Philip P. Jacobs, Ph.D., Assistant Secretary. Cloth. Price, 50 cents. Pp. 331. New York: National Association for the Study and Prevention of Tuberculosis,105 East Twenty-Second St., 1911.

YEAR-BOOK (1911) MAIMONIDES HOSPITAL. History, Achievement, Prospects. Published by the Maimonides Hospital Association for the Information of its Members and to Enlist the Cooperation of the General Public. Paper. S. Neveleff, Managing Director, 1145 Blue Island Ave., Chicago.

YELLOW FEVER AND ITS PREVENTION. A Manual for Medical Students and Practitioners. By Sir Rubert W. Boyce, M.B., F.R.S., Holt Professor of Pathology, University of Liverpool. Cloth. Price, $3.50 net. Pp. 380, with 61 illustrations. New York: E. P. Dutton & Co., 1911.

LE SECRET DE L'UNIVERS DEVANT LA SCIENCE OFFICIELLE. La Mécanique Universelle Dévoilée d'après Clémence Royer et Mise à la Portée de Tous. Par Emile Hureau. Paper. Price, 3 francs 50. Pp. 200. Paris: Jules Rousset, 1 rue Casimir-Delavigne, 1911.

PRECIS D' AUTO-SUGGESTION VOLONTAIRE. Education Pratique de la Volonté. Par le Dr. Géraud Bonnet, d'Oran, Officier de l'Instruction publique. Second Edition. Paper. Price, 3 francs 50. Pp. 302. Paris: Jules Rousset, 1 Rue Casimir-Delavigne, 1911.

FOURTEENTH ANNUAL REPORT OF THE BOSTON INFIRMARY DEPARTMENT OF THE CITY OF BOSTON. For the Year Ending Jan. 31, 1911. Cloth. Pp. 52, with illustrations. Charles E. Donlan, Superintendent.

TWENTY-FOURTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF THE STATE OF OHIO. For the Year Ending Dec. 31, 1909. Cloth. Pp. 479. C. O. Probst, Secretary, Columbus, Ohio.

SANITARY SURVEY FOR SCHOOLS AND DIAGNOSTIC TABLE. Paper. Pp. 15. Price, $1 per dozen. San Francisco: Whittaker & Ray-Wiggin Co., 1911

New Patents

Recent Patents of Interest to Physicians

970781. Appliance for treatment of spinal affections. Joseph W. Battershall, Attleboro, Mass.
970877. Stretcher for hospital and other purposes. William F. Bernstein, Philadelphia.
970883. Obtaining ammonia. Nikodem Caro, Berlin, Germany.
970612. Knockdown tent. Michael H. Cummings, Minneapolis.
970480. Sputum cup. George D. Eddy, Burlington, Vt.
970898. Chemical compound. August Eklund, Spokane, Wash.
970907. Hot water bandage. James E. Forbes, Kopple, and B. A. Darr, McKees Rocks, Pa.
970909. Making ammonium chlorid. Francis A. Freeth, Great Crosby, and H. E. Cocksedge, London, England.
970497. Attachment for crutches. Kathryn D. Harding, Evanston, Ill.
970623. Producing pure or mixed aeriform environment. Henry J. R. Hemming, Washington, D. C.
970825. Making formates and formic acid. Henry Howard, Brookline, Mass.
970961. Abdominal and pelvic supporter. Edward F. Small, Atlanta, Ga.
970662. Oleic-acid derivatives containing a phenyl group. Nathan Sulzberger, New York.
970767. Water bottle. Angeline L. Swingle, Putney, S. D.
970576. Atomizer. Martha von Trautmann, New York.
971244. Apparatus for ozonifying. Charles S. Bradley, New York.
971359. Eucalyptus oil solution and manufacture thereof. Amos M. Cox, Los Angeles.
971259. Apparatus for distributing liquids in measured quantities. Stanislas Effantin, St. Cloud, France.
971499. Optometer. Ivan Fox, Media, Pa.
971368. Treating dolomite. Jean J. Gathy, Mons, Belgium.
971501. Production of ammonia. Fritz Haber and R. Le Rossignol, Karlsruhe, Germany.
971373. Device for removing facial lines and defects. Estelle Hanning, San Mateo, Cal.
971198. Manufacture of metallic sodium. Paul L. Hulin, Grenoble, France.
971381. Invalid bed. John M. Keller, Youngstown, Ohio.
971206. Producing hydrogen. Anton Messerschmitt, Frankfort-on-the-Main, Germany.
971144. Preparing caustic soda. Heinrich Reitz, Griesheim-on-the-Main, Germany.
971145. Preparing caustic potash. Heinrich Reitz, Griesheim-on-the-Main, Germany.
971149. Catalytic body and making same. Karl Schick, Griesheim-on-the-Main, Germany.
971227. Device for dampening the air in closed rooms. Karl Ulrich, Zwelbrusken, Germany.
971516. Nozzle. Isaac K. Beaver, Wilburton, Pa.
972100. Bed for invalids. Arthur F. Crandall, Beresford, S. D.
971099. Bed. Arthur F. Crandall, Beresford, S. D.
971681. Making artificial ointment bases. Samuel Knopf, Vienna, Austria-Hungary.
971916. Non-refillable bottle. John Missall and A. Sommer, New York.
971783. Surgical appliance. Adolph J. Petter, Los Angeles.
971798. Optical instrument. Truis A. Somdal, Springfield, Ill.
972137. Cooler and soda fountain. George W. and H. A. Wise, Cleveland, Ohio.
972318. Inhaler. Edward S. Balthrop, Jackson, Tenn.
972746. Combined rinser and sterilizer. Benjamin W. Beach, Georgetown Station, N. Y.
972337. Vibrating propeller. Barton H. Coffeyl, Boston.
972755. Mortuary refrigerator. Victor A. De Canio, Union Hill, N. J.
972345. Preparation of a fat-like substance from the bodies of bacteria. Georg Deycke, Constantinople, Turkey.
972523. Iron albumin-glycerophosphate and making same. Ernst Fischer, Gronau, near Hanover, Germany.
972686. Applicator. Albert D. Foster, Chicago.
972201. Syringe. Jacob Kussart, Greeley, Colo.
972207. Ventilating canopy. James Moody, South Boston, Va.
972464. Cellulose ester and treating same. Harry S. Mork, Boston.
972711. Adjustable couch-hammock. Isaac E. Palmer, Middletown, Conn.
972712. Head and shoulder rest or support for couch and other hammocks. Isaac E. Palmer, Middletown, Conn.
972713. Head and shoulder support for couch hammocks. Isaac E. Palmer, Middletown, Conn.
972269. Detachable sanitary covering for toilet seats. Max R. Slough, Covina, Cal.
972289. Hand cultivator. Robert I. Teter, Ellis, Minn.
972414. Operating table for the use of physicians and surgeons. Bernard D. Thorner, New York.
972983. Dilator. Richard S. Arthur, Newark, N. J.
973099. Non-refillable bottle. Arnest B. Barner, Elkhorn, Ore.
973336. Producing metal salts and metals. John W. Beckman, Niagara Falls, Ontario, Canada.
973157. Incandescent lamp. Delo H. Bering, Pittsburg, Pa.
973158. Ear bandage. Katherine Berthel, New York.
973164. Obtaining ammonium salts from gas. Karl Burkheiser, Aix-La-Chapelle, Germany.
973270. Apparatus for heating water, milk and other liquids for sterilizing or other purposes. John S. Forbes, Philadelphia.
973427. Combined pencil holder and inhaler. Jesse W. Hayes, Baltimore.
972878. Embalmer's injecting and aspirating apparatus. Bert Leon, Toledo, Ohio.
973283. Adjustable crutch. William H. Loftin, Jacksonville, Fla.
973445. Breast douche apparatus. Alexis Mantelet, Paris, France.
973062. Optical instrument. Benjamin F. Mayo, Salem, Mass.
973375. Moistener. Joseph M. Molloy, Lewiston, Idaho.
973456. Vaginal syringe. Frank A. Neveu, Salt Lake City, Utah.
973296. Surgeon's scissors. George H. Peddler, Parry, N. Y.
973307. Thermometer case. Francis Ruddy, Watertown, N. Y.
972954. Making hypochlorous acid. Henry V. Walker, Brooklyn.
973328. Emulsifier. Joseph Willmann, Derby, Conn.